DOCUMENT RESUME

ED 208 900 IR 009 867

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TITLE Critical Views of LCSH--the Library of Congress Subject Headings: A Bibliographic and Bibliometric Essay and An Analysis of Vocabulary Control in the Library of Congress List of Subject Headings (LCSH).
INSTITUTION ERIC Clearinghouse on Information Resources, Syracuse, N.Y.
SPONS AGENCY National Inst. of Education (ED), Washington, D.C.
PUB DATE 81
CONTRACT 400-77-0015
NOTE 112p.
AVAILABLE FROM Syracuse University Printing Services, 125 College Place, Syracuse, NY 13210 (IR-53; $12.00).

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Annotated Bibliographies; *Indexes; Indexing; *Information Retrieval; *Library Catalogs; *Subject Index Terms
IDENTIFIERS Bibliometrics; *Library of Congress Subject Headings

ABSTRACT

A comprehensive guide to the literature published between World War II and 1979 which critically evaluates the Library of Congress list of Subject Headings (LCSH), this bibliography has been prepared for information personnel involved with subject authority files, thesauri, or vocabulary control. A brief bibliometric analysis of the literature precedes the bibliography, which contains sections devoted to general principles for the analysis of subject headings, rationalizations of the LCSH system, and criticism of LCSH with respect to specificity of indexing language, consistency of syndetic structure, the formation of headings, spareness of headings, and ease of use. Each section of the bibliography is accompanied by a descriptive summary of the items contained therein. Also included is an essay on vocabulary control in LCSH in which the introductions to the first eight editions of LCSH are compared. A bibliography, footnotes, two tables (a catalog of LCSH weaknesses and a chronological and topical overview of literature on LCSH), and three appendices (one an author index) are provided. Footnotes, a table comparing the introductions over the years, and reproductions of the introductions to editions 2-3 of the ALA List of Subject Headings and editions 2-7 and 9 of LCSH accompany the essay. (JL)

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AN ERIC INFORMATION ANALYSIS PRODUCT

In Two Parts

I. **Critical Views of LCSH—the Library of Congress Subject Headings; a Bibliographic and Bibliometric Essay.**

II. **An Analysis of Vocabulary Control in the Library of Congress List of Subject Headings (LCSH).**

by

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1981

IR009867

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This publication was prepared with funding from the National Institute of Education, U.S. Department of Education under contract no. NIE-400-77-0015.

The opinions expressed in this report do not necessarily reflect the positions or policies of NIE or ED.

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INTRODUCTION

1.1. Objectives of Bibliography

Prepared for the student of subject analysis and information personnel involved in subject authority files, thesauri, and vocabulary control, this bibliography confines itself to the literature which critically evaluates the Library of Congress List of Subject Headings (LCSH). However, it has some use beyond that system, as it includes studies of library catalogs with those subject headings. The literature search was limited to a period from post-World War II to 1979, so the references found cover a span of more than 35 years. Journals, books, and conference papers are included.

Every attempt has been made to be comprehensive, but omissions are a definite possibility. The authors welcome suggestions for additions to the bibliography, and want to acknowledge contributions which came from W. Mischo and K. Markey while the manuscript was in final preparation.

Although the Library of Congress adopted its first dictionary catalog in 1898, it was the ALA List of Subject Headings for Use in Dictionary Catalogs, published in 1895, which was used as the basis for developing the Library of Congress subject headings list. First published in 1914, this list was conceived without any structure or code and has grown along with the collection of the national library. Although Cutter's Rules for a Dictionary Catalogue have clearly guided its development, these rules have never been officially acknowledged as guiding principles.[1*] But, as Angell points out, the officers at the time of the creation of LCSH,...

> ...while in accordance in rejecting the classified or alphabetico-classed catalog in favor of the dictionary catalog,...were unwilling to contemplate the dispersion of headings that could follow from full adherence to Cutter's rule of specific entry, at least in its application to compound headings. They preferred to combine elements of a dictionary catalog and a classified arrangement. The fact that the Library of Congress subject headings began as a mixed system opened the door to inconsistent decisions as the catalog grew.[2]

There does not, and never did, exist a "laboratory condition" in the development of LCSH, because this "would demand stringent requirements to conduct experiments and their analysis."[3] Criticism of LCSH has increased over the years, and has become even sharper since the publication of the subject catalog and computerized information retrieval have exposed its weaknesses on a grander scale. In Table 1 we have developed a catalog of LCSH weaknesses which authors have pointed out and occasional suggestions for improvement.

A few words should be said about the validity of evaluations straddling almost 40 years. The Library of Congress has incorporated many changes in headings during this time, although it has never undertaken basic alterations in structure, vocabulary

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*See Footnotes Section at end of bibliography.

Table 1

Selective Catalog of 20 LCSH Weaknesses or Defects with Suggested Improvements, 1898-1979

	LCSH Weaknesses or Defects	Suggested Improvements	Critic and/or Suggestor/Date
(1)	No code for application	Attempt at "code" of practice	Cutter-1898; Haykin-1951; L.C.-1975; Chan-1978
(2)	No rules for grammatical forms	15 rules	Daily-1957
(3)	Inconsistent form of headings	Noun rule	Prevost-1946; Reich-1949
(4)	No structure specified	Leave as mixed system	L.C. Staff-1890s
(5)	Restructuring needed	None	Angell-1971
(6)	"1940 standards of definition" not maintained	None	Frarey-1954
(7)	Need for more scope notes	Provide more scope notes	Kanwischer-1975
(8)	Need connective references for compound subjects	Make more references	Coates-1960; Kanwischer-1975
(9)	Lack of references from geographic subdivisions to subject headings and variant forms	Create references from geographic subdivisions	Hardy-1952
(10)	Subject-place ordering is confusing	Use direct subdivision for all topical headings	Wellisch-1978
(11)	Loose, inconsistent syndetic structure	(a) Chain-indexing of LC class and Thesaurus as one vocabulary system (b) Adopt classification principles for s.a. references	(a) Immroth-1970 (b) Richmond-1959; Mosteckey-1956; Wepsiec-1978

(continued)

Selective Catalog of 20 LCSH Weaknesses or Defects with Suggested Improvements, 1898-1979 (continued)

	LCSH Weaknesses or Defects	Suggested Improvements	Critic and/or Suggestor/Date
(12)	Lack of currency	Discontinue subject added entries and replace with machine produced subject catalogs	McClure-1976
(13)	Prejudicial headings	Counter-lists	Berman-1971; Dickinson-1974; Ferrington-1976; Marshall-1977
(14)	Lack of specificity	Add more specific and direct terms	Taube-1952; Lilley-1955; Enyingi-1975; Balnaves-1976; Atherton-1978; Clark-1978
(15)	Wide conceptual gulf and inadequate designation of concepts	Careful study of words and their function	Ladenson-1953; Christ-1972
(16)	Need for fuller subdivisions	Provide more subdivisions	Hardy-1952
(17)	Period subdivisions need revision for uniform human and computer filing	Six different forms for period subdivisions	Chan-1972
(18)	Sparseness of headings assigned to items	(a) Add headings to tracing (b) Add subject description (contents, book index terms) for computer searching (c) Duplication at specific and general levels	(a) Dornfest-1975; McClure-1976 (b) Atherton-1973 (c) L.C. Staff according to Wilson-1979; Mischo-1979
(19)	No reconciliation between LCSH and LC class	Use LCSH and LC class captions and index together	Daily-1957; Immroth-1970; Williams, Manheimer, and Daily-1972
(20)	Need for machine-readable form and style of LCSH	None	Harris-1970; Mischo-1977

displays, or rules for indexing, and Haykin's guide, based on Cutter and updated by Chan, is still the leading policy on how to form subject headings. Criticisms pronounced at different times during the existence of the list cannot, therefore, be considered on an equal basis for evaluation.

1.2. Arrangement of Bibliography

The bibliography is divided into nine sections. General bibliometric remarks (1.3) are followed by sections covering general aspects, the language of LCSH, its syndetic structure, its subdivisions, form of headings, currency, sparseness, and ease of use.

Each section first lists the references in order by date of publication. Then some remarks are made about how these references have contributed to the discussion of this aspect of LCSH. We read every reference but have not summarized so much as commented on each. The number following an author or title referred to in the textual remarks refers to the listing of the full citation in that numbered section of the bibliography.

To facilitate easy location of the individual bibliographic items, an author index is provided as an appendix. The first number following the date indicates the section citing full bibliographic citation. Additional numbers signify that the work was mentioned several times in the essay.

1.3. General Bibliometric Remarks

An analysis presented in an appendix shows where these items of criticism and information about LCSH have been published over the past 40 years. These tables reveal an interesting pattern: less than 50 percent of this literature has been published in monographs. The universities with strong library school interests in subject analysis are represented, i.e., Columbia, Rutgers, Pittsburgh, Syracuse, and Maryland. The American Library Association is represented by two items, and the Library of Congress (through the U.S. Government Printing Office), by four. Commercial publishers like Wilson, Scarecrow, Libraries Unlimited, Dekker, and Neal-Schuman have also made contributions. Overseas publishers are represented by only a few items. These monographs are almost all classified "LCSH General" in this bibliographic essay (Sections 2-2.3); a few are listed in Sections 7-9.

The journal literature accounted for more than 60 percent of the items. These items were scattered in 21 different journals; two that changed titles are counted as different journals. Library Resources and Technical Services (LRTS) contributed 19 items, the highest concentration, with Library Quarterly's five coming up as a far second in rank. If the four items in the Journal of Cataloging and Classification, the precursor of LRTS, are added to the 19, the gap is even wider. Is this perhaps Bradford's Law of Scatter at work?

Several national library journals are represented--Australia, Canada, South Africa, Japan, Uganda--and a few specialized journals as well, including law, information science, special libraries, reference, academic librarianship, information processing, and intellectual freedom. Regional journals are also to be found in this list, as well as the nationwide commercial library journals.

Research and criticism of LCSH have covered so many aspects that there appeared to be a need to look at it all more holistically, and this bibliography was one result of such an effort. Bibliometric studies conducted since its completion provide further insights into the time frame and focus of the studies.

Table 2, which follows the organization of the bibliography (Sections 2-9), shows that, while attention was given to LC subject headings during the late 1940's and early 1950's, it has greatly intensified since 1968. The one aspect which has attracted the greatest number of criticisms is the underlying principles (Section 2.3 of this essay). In fact, general aspects (Section 2, all parts) accounts for one third of the items in this compilation. The table shows a rather even distribution over the years, hardly ever more than three items in any one year until the 1970's.

The language of LCSH is the subject of greatest specific interest (Section III of Table 2). Only modestly treated in the 1940's and 1950's, the number of writings on this topic have more than doubled since 1971.

Sparseness of headings (Section 8) and currency and prejudices of LCSH (Section 7) did not trouble analysts until the late 1960's. Then they attacked LC's shortcomings vigorously until the American Library Association/Resources and Technical Services Division (ALA/RTSD) Subject Analysis Committee formed an Ad Hoc Racism and Sexism in Subject Analysis Subcommittee in June 1977. Their summary report appeared in the RTSD Newsletter, issued in April 1981, while this manuscript was in its final stages.

Few writers have concentrated on syndetic structure (Section 4) or subdivisions (Section 5), the fundamental features in the construction of subject authority lists and thesauri.

The Library of Congress has not issued much to indicate that they have paid heed to the exhortations of researchers and practitioners. Habits and bureaucracy have made it too "costly to change the basic philosophy," says Paul Dunkin. "It is much easier to rationalize practice, as Haykin and Julia Pettee did."[4] Lois Chan's recent book carried this one step further, recognizing that practices are very idiosyncratic until this day.

As a tool for subject access to a library's holdings, several authors have felt that LCSH should be used together with the captions or headings for class numbers in the LC classification scheme. But, until 1941, the act of classification and the assignment of subject headings were two separate administrative processes at the Library of Congress, and this encouraged divergent placements.[5] However, searches by call number or class schedule captions had been studied before the advent of the MARC tapes, and their usefulness for retrieval has been supported by system design studies.[6] Manheimer considers the ideal situation to be one where the creation of both access points is combined in a one-step process "so that subject headings and classification headings would be identical."[7] She worked on the compilation of an alphabetical index from classification headings as a start toward unification of all class indexes, as well as of indexing and classification language, but this demonstration project was not continued by either Manheimer or the Library of Congress. The group at Mankato State University in Minnesota has done the work recently.

A few remarks about the authors are included in this essay. Of the 89 personal authors listed in Appendix 1, 68 (or 86 percent) contributed only one document. Of the 23 authors who are cited twice, nine have all their writings listed in the same section.

Table 2. Chronological and Topical Analysis of Literature on LCSH (Post World War II)

Aspect of LCSH Covered	Dates of Writings																																Number of Writings per Section	
	1944	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	Subtotal	Total
2. General Principles for Subject Headings			1						2	1				1			1								1							3			10	
2.1 LCSH: General--Rationalization					1			1						1				1						1	1		1				2	1	1	1		12	50
2.2 LCSH: General--Reviews & Revisions								1																				1				1	1	3	2	9	
2.3 LCSH: General--Criticism	1								1					2	1		1	1						1	1		1	2	4		1	1	1				19	
3. LCSH: Language--General			1			1	1			2																			1			1				7	19
3.1 LCSH: Language--Specificity										1		1	1																1			2	2	1	2	1	12	
4. LCSH: Syndatic Structure													1	1		1													2				1	1	2		9	9
5. LCSH: Subdivision--General																										1											1	
5.1 LCSH: Subdivision--Period																													1	1				1			3	9
5.2 LCSH: Subdivision--Geographical																			1							1	1		1						1		5	
6.1 LCSH: Form of Headings--Direct vs. Indirect					2	1																				1				1						5	7
6.2 LCSH: Form of Headings--Variant Spelling																									1												1	
6.3 LCSH: Form of Headings--Romanization																														1							1	
7. LCSH: Currency																											3	1	1	1	2	1	3	1		13	13
8. LCSH: Sparseness of Headings			1				1																	1	1		1			1		1	2	2	1	13	13
9. LCSH: Ease of Use	1																							2								2	4	1	1	11	11
	2	0	3	0	3	2	2	2	3	4	0	1	2	5	1	1	2	2	1	0	0	0	0	5	4	4	4	5	12	5	2	8	11	17	13	5		131
	1940's=10							1950's=21									1960's=18										1970's=82										

NOTE: A few items have been placed in more than one section.

Two of the three authors who are represented with three or more citations confine themselves to a specific area of critique. They are Jay E. Daily, who applies his great overall knowledge to criticism of LCSH, and Sanford Berman, whose overriding concern is currency and prejudice in LC subject headings. Lois Chan emerges as one of the most versatile authors on the subject of LC.

Few authors span more than one decade in their contributions. Only Richmond, Steinweg, and Daily show a "continuous" interest. Richmond had one article in 1959 and another in 1977, while Steinweg had one in 1950 and another in 1978. Daily had contributions in 1957, 1967, and 1972. Most of the authors have made one major contribution, e.g., Christ, Pettee, Dunkin, Knapp, Lilley, Prevost, and McClure. Perhaps a research group for LCSH like the Classification Research Group in Great Britain would encourage more publication in all areas.

2. General Principles for Subject Headings*

Cutter, Charles Ammi. Rules for a Printed Dictionary Catalog. Washington, DC: U.S. Government Printing Office, 1876.

Pettee, Julia. Subject Headings: The History and Theory of the Alphabetic Subject Approach to Books. New York: Wilson, 1946.

Tauber, Maurice F., Ed. The Subject Analysis of Library Materials. Papers presented at an Institute, June 24-28, 1952. New York: Columbia University, School of Library Science, 1953.

"Symposium on Subject Headings." New York, July 1-2, 1952. Journal of Cataloging and Classification 8, 4 (1952).

Coates, Eric James. "Alphabetical Subject Catalogues," Journal of Documentation 9 (March 1953): 58-63.

Metcalfe, John Wallace. Information Indexing and Subject Cataloguing: Alphabetical: Classified: Coordinate: Mechanical. Metuchen, NJ: Scarecrow Press, 1957.

Frarey, Carlyle J. "Subject Headings." In The State of the Library Art, Vol. 1, Pt. 2. New Brunswick, NJ: Graduate School of Library Science, Rutgers-The State University, 1960.

Dunkin, Paul S. Cataloging U.S.A. Chicago: American Library Association, 1969.

Fussler, Herman H. and Kocher, Karl. "Contemporary Issues in Bibliographic Control," Library Quarterly 47 (July 1977): 241.

Foskett, A. C. The Subject Approach to Information, 3rd ed. Hamden, CT: Linnet Books, 1977.

Svenonius, Elaine and Schmierer, Helen F. "Current Issues in the Subject Control of Information," Library Quarterly 47 (July 1977): 347-369.

The above entries introduce principles and problems of vocabulary control in general, often including or unconsciously assuming LCSH. They are helpful in putting LCSH in a proper setting.

In this and all of the later editions of his book, Cutter lays the foundation of American philosophy in respect to subject headings. Julia Pettee goes into more depth. Not as critical as Dunkin, she rather explains their use. In "Subject Headings,"

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*Each section of the bibliography will first list the references in order by date of publication. Then some remarks will be made about how these references contributed to the discussion of this aspect of LCSH. We read every reference but have not summarized so much as commented on each. The number following an author and/or title referred to in the textual remarks refers to the listing of the full citation in that numbered section of the bibliography.

Frarey reveals the very essence of the problems connected with subject cataloging: "It does not reflect any clear understanding of function or purpose." Subject Analysis of Library Materials is interesting for two reasons: first, for its chapter on subject headings, which contains an article by Haykin on their principles and development, as well as state-of-the-art subject headings papers for different disciplines; second, for its section of user surveys--especially Frarey's--which also provides insights for LC headings. The "Symposium on Subject Headings" suggests selection and standards of subject headings for specific types of libraries, while Metcalfe and Foskett discuss various aspects of LCSH throughout their books. The 1978 book by Chan is the capstone to the discussion of LCSH which now stretches over a century.

2.1. LCSH: General--Rationalization

Vatican Library. Rules for the Catalog of Printed Books. Translated from the second Italian edition by T. J. Shanahan et al., edited by W. E. Wright. Chicago: American Library Association, 1948.

Haykin, David Judson. Subject Headings: A Practical Guide. Washington, DC: U.S. Government Printing Office, 1951.

Haykin, David Judson. Project for a Subject Heading Code: Revised. Washington, DC: U.S. Goverment Printing Office, 1957.

Taylor, Jed H. "Classification and Subject Headings in the Small College Library," Library Resources and Technical Services 5 (1961): 87-90.

Avram, Henriette D.; Guiles, Kay D.; and Meade, Guthrie T. "Fields of Information on Library of Congress Catalog Cards: Analysis of a Random Sample 1950-1964," Library Quarterly 37 (April 1967): 180-192.

Dewey, Harry. "The Relationships Between the Headings in the Subject Catalog and the Classification Numbers of the Books." In Jean M. Perreault, Ed., Reclassification: Rationale and Problems. Proceedings of a Conference on Reclassification, pp. 66-67. College Park, MD: University of Maryland, School of Library and Information Services, 1968.

Harris, Jessica Lee. Subject Analysis: Computer Implications of Rigorous Definition. Metuchen, NJ: Scarecrow Press, 1970.

Rydings, H. Anthony. "Subject Headings for a Local Catalog," Library Resources and Technical Services 19 (1975): 24-30.

Library of Congress, Catalog Division. Subject Headings Used in the Dictionary Catalogs of the Library of Congress, 8th ed. Washington, DC: U.S. Government Printing Office, 1975.

Williams, Martha E. and Shefner, Gordon J. "Data Element Statistics for the MARC II Data Base," Journal of Library Automation 9 (June 1976): 89-100.

Chan, Lois Mai. Library of Congress Subject Headings: Principles and Application. Research Studies in Library Science, #15. Littleton, CO: Libraries Unlimited, 1978.

Being the acknowledged guide for LCSH, Haykin's work is, of course, essential. His "Project for a Subject Heading Code" was neither finished nor published, thus leaving the door open for fundamental change. In the introduction to the 8th edition of LCSH, the Library of Congress (LC) for the first time makes an extended attempt to explain the applications of its rules. Lois Chan follows in Haykin's footsteps, but she does no more than bring LC practices up to date. The chapters "Basic Principles" and "Future Prospects" ask thought provoking questions and offer alternatives concerning the future of the list and the state of indexing per se. The rules for the catalog of the Vatican Library, originally published in Italian in 1931, follow LC practice closely, and Harris considers the section on subject cataloging a much clearer statement than anything published by LC. In designing a styling procedure for conversion of LCSH into machine readable form, she arrives at "as vigorous a definition of the current manual procedures as possible." But she confesses that inconsistency and unpredictability of the headings cause a problem. Work by Avram and others, Dewey, and Williams and Shefner provides the kind of data analyses we can expect now that the MARC records and LCSH are in machine-readable form. The O'Neill and Aluri 1981 article in Library Resources and Technical Services (pp. 63-80) is out of scope (by date) from this review, but it was noted as being very informative while preparing this manuscript for the printers.

2.2. LCSH: General--Reviews and Revisions

Frarey, Carlyle James. Subject Heading Revision by the Library of Congress, 1941-1950. Thesis (M.S. in L.S.), Columbia University, 1951. Rochester, NY: University of Rochester for the Association of College and Research Libraries, 1954.

Angell, Richard S. "Library of Congress Subject Headings: Review and Forecast." In H. Wellisch and T. D. Wilson, Eds., Subject Retrieval in the Seventies: New Directions. Proceedings of an International Symposium, University of Maryland, May 14-15, 1971, pp. 143-163. Westport, CT: Greenwood Publishing Co. and University of Maryland, School of Library and Information Services, 1972.

Austin, Derek. "The CRG Research into a Freely Faceted Scheme." In Arthur Maltby, Ed., Classification in the 1970's: A Second Look, pp. 158-165. Hamden, CT: Linnet Books, 1976.

Richmond, Phyllis A. "PRECIS Compared with Other Indexing Systems." In Hans H. Wellisch, Ed., The PRECIS Index System. New York: H. W. Wilson Co., 1977.

Dykstra, Mary. "The Lion That Squeaked," Library Journal 103 (Sept 1, 1978): 1560-1572.

Hunt, Roslyn, et al. PRECIS, LCSH, and KWOC: Report of a Research Project Designed to Examine the Applicability of PRECIS to the Subject Catalog of an Academic Library. Part II. Wollongong, New South Wales: University of Wollongong Library, 1977. Summarized by E. Michael Keen, Journal of Documentation 34 (Dec 1978): 356-357.

Library of Congress. "Subject Heading System," Library of Congress Information Bulletin 37 (Mar 3, 1978): 154.

Weintraub, D. Kathryn. "An Extended Review of PRECIS," Library Resources and Technical Services 23 (Spring 1979): 101-115.

Mischo, William H. Library of Congress Subject Headings: A Review of the Problems and Prospects for Improved Subject Access. Manuscript, 29p. Iowa State University (Ames), Library, 1979.

Frarey's comparison of the fourth and fifth editions of LCSH leads to conflicting conclusions. The revision process is seen as vigorous and ongoing, aiding the syndetic structure and specificity. At the same time, the author regrets that the "1940 standards of definitions" have not been maintained. Angell reviews nine major aspects of LCSH and advocates an orderly restructuring for future editions. The various efforts to compare and possibly replace LCSH with PRECIS which are separately reported in 1975 to 1979 references are summarized by Mischo.

2.3. LCSH: General--Criticism

VanHoesen, H. B. "Perspective in Cataloging with Some Applications," Library Quarterly 14 (1944): 101-107.

Hardy, May G. "The Library of Congress Subject Catalog: An Evaluation," Library Quarterly 22 (1952): 40-50.

Scheerer, George. "Subject Catalog Examined," Library Quarterly 17 (1957): 192.

Daily, Jay Elwood. The Grammar of Subject Headings: A Formulation of Rules for Subject Headings Based on a Syntactical and Morphological Analysis of the Library of Congress List. (Doctoral dissertation, School of Library Service, Columbia University, 1957.) Dissertation Abstracts International, 1957, 17, 2019. (University Microfilms No. 00-21,780)

Lilley, Oliver L. Terminology, Form, Specificity, and Syndetic Structure of Subject Headings for English Literature. (Doctoral dissertation, School of Library Service, Columbia University, 1958.) Dissertation Abstracts International, 1960, 20, 1799. (University Microfilms No. 59-03116)

Coates, Eric James. "Library of Congress Practice." In Eric James Coates, Subject Catalogues: Headings and Structure. London: Library Association, 1960.

Olding, R. K. "Form of Alphabetico-Specific Subject Headings, and a Brief Code," Australian Library Journal 10 (1961): 127-137.

Daily, Jay Elwood. "Many Changes, No Alterations: An Analysis of Library of Congress Subject Headings, 7th Edition," Library Journal 92 (1967): 3961-3963.

Immroth, John Phillip. The Problem of Vocabulary Control in Subject Analysis of Materials. (Doctoral dissertation, University of Pittsburgh, 1970.) Dissertation Abstracts International, 1971, 31, 4186A. (University Microfilms No. 71-03522)

Immroth, John Phillip. Analysis of Vocabulary Control in Library of Congress Classification and Subject Headings. Research Studies in Library Science, 3. Littleton, CO: Libraries Unlimited, 1971.

Patterson, Charles Darold. A Graphemic, Morphological, Syntactical, Lexical, and Contextual Analysis of the Library of Congress Music Subject Headings and Their Relationship to the Library of Congress Classification Schedule, Class M, as Determined by a Comparative Sampling of Their Two Vocabularies. Dissertation Series, University of Pittsburgh, 1971. Dissertation Abstracts International, 1972, 32, 4642A. (University Microfilms No. 72-07564)

Williams, James G.; Manheimer, Martha L.; and Dailey, Jay E., Eds. Classified Library of Congress Subject Headings. Books in Library and Information Science, 1-2. New York: Dekker, 1972.

Wellisch, Hans. "Subject Retrieval in the Seventies." In Hans Wellisch and Thomas D. Wilson, Eds., Subject Retrieval in the Seventies, p. 12. Westport, CT: Greenwood Publishing Co., 1972.

Cipola, Wilma Reid. "Music Subject Headings: A Comparison," Library Resources and Technical Services 18 (1974): 387-397.

Aveney, Brian. "Facing Our Technology," Journal of Library Automation 8 (June 1975): 85-86.

Metcalfe, John W. Information Retrieval, British and American, 1876-1976. Metuchen, NJ: Scarecrow Press, 1976, pp. 73-107.

In his dissertation, Daily analyzes the fifth edition of the LCSH to determine the function of each grammatical form in the structure. This leads him to design 15 rules of his own which are profoundly different from Cutter's. He further suggests a classified guide to supplement the list. This proposal is reiterated in "Many Changes..." where he particularly stresses the importance of "semantic change of natural language" for the formation of subject headings.

Probing the relationship of LCSH and LC classification, Immroth finds very little context due to classification references and syndetic structure: the terminology is not closely related. He therefore recommends chain-indexing of the classified vocabulary to provide subject headings. Classification and subject headings would thus be united into a thesaurus, i.e., into one vocabulary control system instead of two or three. Dewey (Section 2.1) also commented on this relationship.

Patterson, on the other hand, restricted his analysis of subject headings and classification to music, and generated a single vocabulary from LCSH, the class M vocabulary, and class M index. He discovered a large percentage of identical terms and a high degree of lexical and contextual synonymity.

Williams, Manheimer, and Daily generated a list of subject headings from all LC class terms. The two volumes, which provide both discipline and topic access to the seventh edition, also include main headings and see references from the subject heading list. They offer a solution from existing sources which bypasses problems with the unpredictability of the form of subject headings, the inadequate class reference structure, and the tangential relationship between classification and the subject heading list.

Coates sees a significant relationship between connective references and compound subjects. He comments that this is not thought through and consistently applied in the LCSH list, which results in confusing inconsistencies.

Comparing LCSH and the New York Public Library music subject headings, Cipola finds the former weak in regard to currency, synonyms, subdivision, inversion, and specificity. But Lilley, who used mostly LCSH and Sears lists for his data, finds that the overall terminology and form headings for English literature are appropriate "for the purposes for which they were employed." Yet he too concedes that problems exist. Headings at the same level of specificity may be employed for such a wide variety of purposes that their exact uses are highly unpredictable on the basis of terminology and form alone.

The syndetic apparatus is found wanting by most of the authors.

In reviewing the LC Subject Catalog, Mary Hardy enumerates several problems which are directly due to LCSH. She desires fuller subdivisions under many headings and more scope notes, deplores inconsistencies in subject entries and the lack of references from geographic subdivisions to the subject headings and from variant forms. All other faults are logically related to weaknesses in the list itself. The comments of Wellisch, Aveney, and Metcalfe in the 1970's amplify this criticism.

3. LCSH: Language--General

Prevost, Marie. "An Approach to Theory and Method in General Subject Headings," Library Quarterly 16 (1946): 140-151.

Reich, Philippa. "On Being Practical with Prevost," Journal of Cataloging and Classification 5 (1949): 67-69.

Steinweg, Hilda. "Thoughts on Subject Headings," Journal of Cataloging and Classification 6 (1950): 640-645.

Ladenson, Alex. "Application and Limitations of Subject Headings: The Social Sciences." In Maurice F. Tauber, Ed., The Subject Analysis of Library Materials, pp. 67-68. New York: Columbia University, School of Library Service, 1953.

Seely, Pauline A. "Subject Headings Today," Library Journal 78 (1953): 17-22.

Christ, John M. Concepts and Subject Headings: Their Relation in Information Retrieval and Library Science. Metuchen, NJ: Scarecrow Press, 1972.

Dickinson, Elisabeth. "Of Catalogs, Computers, and Communication," Wilson Library Bulletin 50 (1976): 463-470.

Ladenson and Christ see the shortcomings of LC headings as the result of the "wide conceptual gulf" that exists between a subject field and library science. Only a careful study of words and their functions creates the right setting in which subject headings can be constructed.

Wepsiec, in a 1981 article out of scope (by date), looks like a very important contribution to this topic, discussing headings as being grouped into 22 types by the structure of the focal nouns and modifiers (see Library Resources and Technical Services (April/June 1981), 196-203).

In Dickinson's view, overconcern with the mechanics of cataloging has led to "lopsided and cryptic description of books" and thus to a "failure in the communication process." Inadequate description of concepts and lack of specificity and currency are the consequences. Authority control is one way in which individual libraries can improve LC subject headings. Prevost, however, would rather begin all over again. Her contribution is the noun rule, which allows entry under nouns only and from which several other principles are derived. Reich applied this rule for the Oakland Public Museum Library with great success.

3.1. LCSH: Language--Specificity

Taube, Mortimer. "Specificity in Subject Headings and Coordinate Indexing," Library Trends (Dec 1952): 219-223.

Lilley, Oliver. "How Specific Is Specific?" Journal of Cataloging and Classification 11 (Jan 1955): 3-8.

Alben, Alice Strong. Library of Congress Subject Headings and Their Use in College and University Libraries. Rochester, NY: 1956. Available on Microcards.

Enyingi, Peter; Ford, William T.; and Iamele, Richard T. "Library of Congress Subject Heading Modification and Development of the Subject Authority File at Los Angeles County Law Library," Law Library Journal 68, 1 (1975): 1-10.

Balnaves, John. "Specificity." In W. Boyd Raynard, Ed., The Variety of Librarianship: Essays in Honour of John Wallace Metcalfe, pp. 47-56. Sydney: Library Association of Australia, 1976.

Svenonius, Elaine. "Metcalfe and the Principles of Specific Entry." In W. Boyd Raynard, Ed., The Variety of Librarianship: Essays in Honour of John Wallace Metcalfe, pp. 171-189. Sydney: Library Association of Australia, 1976.

Chan, Lois Mai. "Alphabetical Arrangement and Subject Collocation in Library of Congress Subject Headings," Library Resources and Technical Services 21 (1977): 156-169.

Atherton, Pauline A. and Markey, Karen. "Library of Congress Subject Headings in BOOKS. An In-depth Vocabulary Analysis." In Subject Access Project: Books Are for Use. Final Report to the Council on Library Resources, pp. 30-36. Syracuse, NY: Syracuse University, School of Information Studies, 1978. ED 156 131.

Clack, Doris Hargrett. "Adequacy of Library of Congress Subject Headings for Black Literature Resources," Library Resources and Technical Services 22 (1978): 137-144.

Steinweg, Hilda. "Specificity in Subject Headings," Library Resources and Technical Services 23 (1979): 55-68.

Specificity has been a growing concern because of increased specialization and the interdisciplinary approach to research. The overall conclusion reached by these authors is that the LCSH is wanting in this respect.

Taube, the creator of the UNITERM concept, began the debate with his 1952 article. In 1956, Alben found in a test case that 75 percent of faculty members agreed with actual LCSH; this rate dropped to 50 percent for students. Agreeing that specificity is a major problem, Steinweg and Lilley cite numerous examples to show the variety of ways by which LCSH achieves this. Balnaves and Svenonius continue the debate in 1976. The relative optimism of some authors is not shared by others in their findings, e.g., Atherton and Markey declare the "vocabulary insufficient for subject description" as "it does not have a rich enough store of unique words."

In Chan's opinion, there exists a fundamental problem. The preface and explanations of LCSH do not explain clearly whether the LC list is designed more for an alphabetico-classed or a dictionary catalog. The greater specificity requirements of the latter cannot be reconciled with the broader classificatory interests of the former. Yet inverted headings and headings with subdivisions represent modification of the principles of specific entry to which LCSH subscribes.

There is hardly a group of scholars representing various disciplines that has not complained about LCSH's lack of adequate and detailed terminology.

Christ (Section 3) and Ladenson (Section 3) investigated the social sciences.*

The following remedies proposed by Clack for the treatment of Black literature can be generalized for other fields:

1. Prescriptive measures to further proper analysis;
2. Subject headings that reflect topic and race association rather than rely on complementary headings;
3. Research in subject analysis to provide an adequate foundation for the improvement of present practices or to design a new, more receptive system.

Enyingi, Ford, and Iamele offer modifications by adapting terms and subdivisions to better express the concepts of law.

*The number following an author refers to the full citation in that section of the bibliography.

4. LCSH: Syndetic Structure

Mostecky, Vaclav. "Study of the See Also Reference Structure in Relation to the Subject of International Law," American Documentation 7 (1956): 294-314.

Richmond, Phyllis Allen. "Cats: An Example of Concealed Classification in Subject Headings," Library Resources and Technical Services 3 (1959): 102-112.

Sinkankas, George M. Study in the Syndetic Structure of the Library of Congress List of Subject Headings. Pittsburgh Studies in Library and Information Sciences, 2. Pittsburgh, PA: University of Pittsburgh, Graduate School of Library and Information Sciences, 1972.

Wepsiec, Jan. "Inquiry into the Syndetic Structure of the Library of Congress Subject Headings in Anthropology," Library Resources and Technical Services 22 (Winter 1978): 61-80.

It is not surprising that a system like LCSH does not have a consistent syndetic structure there have been "too many cooks" over the years with no real cookbook. Sinkankas' interesting study shows that the searcher is not guided well through a subject area, but rather "led out of it, and very quickly."

At best, LCSH can be said to have a random classification, which is useless, particularly in computerized systems. Bates (Section 9), Dickinson (Section 3), Daily (Section 2.3), and Atherton and Markey (Section 3.1) come to the same conclusion.

Having discovered a "concealed classification," Richmond concludes that LCSH should adopt classification principles for making see also references in order to create a more functional structure.

Mostecky outlines a method for developing a systematic list of subject headings for international law and Wepsiec investigated the problem for anthropological literature.

5. LCSH: Subdivision--General

Harris, Jessica Lee. Subject Headings: Factors Influencing Formation and Choice, with Specific Reference to Library of Congress and H. W. Wilson Practice. (Doctoral dissertation, Columbia University, 1969.) Dissertation Abstracts International, 1970, 30, 4470A. (University Microfilms No. 70-06991)

Harris' research indicates that one aspect of subdivision is to reduce the length of undifferentiated files to provide a classified subarrangement.

5.1. LCSH: Subdivision--Period

Chan, Lois Mai. "The Period Subdivision in Subject Headings," Library Resources and Technical Services 16 (1972): 453-459.

Wang, Sze-Tseng. "The Structure of Library of Congress Subject Headings for Belles-Lettres in Chinese Literature," Library Resources and Technical Services 17 (1973): 231-237.

In "Alphabetical Arrangement and Subject Collocation" (Section 3.1), Chan argued that subdivisions diffuse specificity. Wang, on the other hand, sees more need for them in his investigations of period subdivisions of Chinese literature. Here, Chan proposes six different forms of period subdivision to enhance consistency and uniformity for both human and computer filing.

5.2. LCSH: Subdivision--Geographical

Brinkler, Bartol. "The Geographical Approach to Materials in the Library of Congress Subject Headings," Library Resources and Technical Services 6 (1962): 49.

Coen, James A. "An Investigation of Indirect Subdivision by Place in Library of Congress Subject Headings," Library Resources and Technical Services 13 (1969): 62-78.

Hudson, Judith A. "Searching MARC/DPS Records for Area Studies: Comparative Results Using Keywords, LC and DC Class Numbers," Library Resources and Technical Services 14 (1970): 530-545.

Veryha, Wasyl. "Library of Congress Classification and Subject Headings Relating to Slavic and Eastern Europe," Library Resources and Technical Services 16 (Fall 1972): 470-487.

Wellisch, H. H. "Poland Is Not Yet Defeated; or, Should Catalogers Rewrite History?; with a Discourse on When Is an Island Not an Island?" (Revised Instructions of the Library of Congress on Indirect Subdivision of Topical Headings.) Library Resources and Technical Services 22 (1978): 158-167.

Subject-place ordering is quite confused in LCSH, and the reason for it may well be, as Brinkler claims, that the latest public statement of LC policy on that topic was in 1925.* Coen notes an increase in headings with indirect subdivisions by place, mainly in science and technology, between the fifth and the seventh editions. Wellisch proposes a simple remedy, namely "to use direct subdivision of topical headings for all countries or regions in keeping with the previous Library of Congress practice for cities, counties, and regions in the U.S." It is, of course, confusing for catalogers and searchers alike to find local material under general subjects, when special subjects are found under geographic or national headings (see Veryha). It is not surprising, then, that Hudson found that geographic subdivisions provide a better access on MARC files than geographic codes.

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*The eighth edition has rectified this somewhat, but in less than two pages.

6.1. LCSH: Form of Headings--Direct vs. Indirect

Gull, C. D. and Taube, M. "Introduction." In U.S. Library of Congress, Science and Technology Project, List of Subject Headings. Washington, DC: Library of Congress, 1948.

Gull, C. D. "Some Remarks on Subject Headings," Special Libraries 40 (1949): 83-88.

Chan, Lois Mai. "'American Poetry' but 'Satire, American': The Direct and Inverted Forms of Subject Headings Containing National Adjectives," Library Resources and Technical Services 17 (1973): 330-339.

Harris (Section 5) is of the opinion that "the choice between inversion and direct entry of adjectival phrases...is strongly influenced by which of two words in the phrase better specifies the subject." She concludes that specificity should be determined by frequency of use. Chan disagrees, arguing that subject matter would be a less bewildering guide. However, as subject fields differ, different rules would then have to be designed for each field.

In describing the adaptation of LCSH for the predominant report literature of the Science and Technology Project in the Library of Congress, Gull notes that direct entry is satisfactory to achieve specificity.

6.2. LCSH: Form of Headings--Variant Spelling

Kesting, J. G. "A Preliminary Analysis of Variant Spelling Forms Derived from the Library of Congress," South African Libraries 36 (1968): 10-27.

Kesting lists spelling variations between the Library of Congress and the University of Toronto Library and suggests for each case the form to be adopted by the university library.

6.3. LCSH: Form of Headings--Romanization

Wang (Section 5.1) recommends that more romanized Chinese terms be chosen for those Chinese literary genres foreign to Anglo-Saxon concepts.

7. LCSH: Currency and Prejudices

Berman, Sanford. "Children, 'Idiots,' the 'Underground,' and Others," Library Journal 96 (1971a): 4162-4167.

Berman, Sanford. Prejudices and Antipathies: A Tract on the Library of Congress Subject Heads (sic) Concerning People. Metuchen, NJ: Scarecrow Press, 1971b.

Marshall, Joan K. "Prejudice Through Library of Congress Subject Headings," Newsletter of Intellectual Freedom 20 (1971): 126-127.

Berman, Sanford. "Prejudices and Antipathies: A Supplement." Part 1: Ugandan Libraries 1, 1 (1972): 21-26. Part 2: Ugandan Libraries 1, 2 (1973): 18-23.

White, John B. "On Changing Subject Headings," Library Resources and Technical Services 16 (1972): 466-469.

Hennepin County Library, Cataloging Section. Cataloging Bulletin, No. 1- . Edina, MN: 1973- .

Dickinson, Elisabeth. "The Word Game," Canadian Library Journal 31 (1974): 338-343.

Buffalo and Erie County Public Library, Buffalo, New York. "Subject Headings List: Women's Liberation," Unabashed Librarian No. 14 (1975): 32.

Kanwischer, Dorothy. "Subject Headings Trauma: Making Do with First Aid," Wilson Library Bulletin 49 (1975): 651-654.

Ferrington, Gerda. "A List of Canadian Subject Headings," Canadian Library Journal 33 (1976): 457-460.

Berman, Sanford. "Nitty-Gritty Heads: A Selection of People-Helping Descriptors LC Hasn't Gotten Around to Yet, and a Nifty Idea to Expand the Usefulness of Your Catalog by Reference to Outside Information Sources," Unabashed Librarian No. 22 (1977a): 8.

Berman, Sanford. "Kid's Stuff: A Grabbag of Hennepin County Library Subject Headings for (Mostly) Children's Media," Unabashed Librarian No. 25 (1977b): 6-7.

Marshall, Joan K. On Equal Terms: A Thesaurus for Nonsexist Indexing and Cataloging. New York: Neal-Schuman Publishers, Inc., 1977.

Berman, Sanford. "Overdue: Stop Playing Hide-and-Go-Seek with Ethnic Materials," Wilson Library Bulletin 52 (1978): 691.

Kanwischer's 1974 survey records that librarians consider LCSH adequate for users. She feels that if some in the profession want to improve these subject headings, ample cross-referencing and explanatory notes will make them more current without sacrificing previous subject approaches or requiring extensive redoing of subject cards. But Berman believes such a half-baked attempt will perpetuate the many prejudices existent in the list.

Feeling in regard to this question of prejudicial headings has run so high that counter-lists have even been produced. Marshall's thesaurus for nonsexist indexing and catalog, On Equal Terms..., is based on the LC list. Ferrington has created a Canadian list of subject headings enriching LC terminology in favor of Canadiana, and the National Library of Canada has now published a Canadian list. The Hennepin County Library, under the leadership of Elisabeth Dickinson and Sanford Berman, has been most progressive in this area. They urge librarians to take the initiative and they themselves have been publishing a bulletin listing, with explanatory notes, new cross-references, new and revised DDC notations, and subject headings. In numerous articles they have attacked LC's linguistic conservatism as it relates to women, children, the handicapped, racial, and social minorities. In Prejudices and Antipathies..., Berman isolates weak areas, suggesting alternate terms and including do-it-yourself techniques. The ALA RTSD/Subject Analysis Ad Hoc Committee on Racism and Sexism summary report shows how far critical review can have an impact (see Appendix III).

8. LCSH: Sparseness of Headings

Markley, Anne Ethelyn. "The University of California Subject Catalog Inquiry: A Study of the Subject Catalog Based on Interviews with Users," Journal of Cataloging and Classification 6, 4 (1950): 88-94.

Perrine, Richard H. "The Imperfect Key: Catalog Use Study," RQ 6 (1967): 115-119.

Perrine, Richard H. "Catalog Use Difficulties," RQ 7 (1968): 169-174.

Atherton, Pauline A. Putting Knowledge to Work: An American View of Ranganathan's Five Laws of Library Science. Sarada Ranganathan Endowment for Library Science, Series 2, 5. Delhi, India: Vikas Publishing House, 1973.

Dornfest, Wilma. "Expanding Collection Use Through Modified Library of Congress Subject Headings," LACUNY Journal 4 (Fall 1975): 1921.

McClure, Charles R. "Subject and Added Entries as Access to Information," Journal of Academic Librarianship 2 (1976): 9-14.

Mischo, William H. "An Augmented Keyword Index to Abstracting and Indexing Services," Journal of Academic Librarianship 3 (July 1977): 141-145.

Wilson, Patrick. "The End of Specificity," Library Resources and Technical Services 23 (1979): 116-121.

Structural and linguistic problems are compounded by the small number of headings assigned and by difficulties of use of LCSH. For the period 1950 to 1973, McClure estimates a stable average of 1.3 subject headings per item in the National Union Catalog. From Perrine we learn that the headings a user hopes to find may be absent for one third of all books cataloged according to LCSH. Dornfest reports that Staten Island Community College adds subheadings in addition to those provided by LC according to the needs of the students. The library adheres to LC practices frequently, drawing on analytics. Atherton and Markey (Section 3.1) urge the inclusion of titles, tables of contents, and book indexes for a better representation of document content. Duplication of overlapping but not identical headings, as Pettee (Section 2) found, adds the advantages of a classificatory catalog to the dictionary catalog, providing broadness instead of specificity, but does not increase the number of subject headings. Wilson investigates the same problems, i.e., what he describes as a new practice at LC, namely the systematic duplication of entries at specific and general levels. Although still only selectively applied, he argues that this practice means an end of the rule of specificity and, while bloating the catalog, does not describe the contents of a document in any more detail.

Many subject experts do not find their field adequately analyzed. (According to Clack (Section 3.1), only 50 percent of Black literature is adequately analyzed.) McClure's use studies indicate a low subject catalog use. Bates ("System Meets User," Section 9) fears that low redundancy may lead to underutilization of the library collection. It also deceives the user into thinking that he has found everything.

Despite better word accessibility, subject searches on MARC tapes do not prove exhaustive if done through subject headings alone. Title and note fields should also be

searched (Hudson, Section 5.2). Atherton expresses serious doubts as to the adequacy of subject fields on MARC records. McClure asks whether it would not be better to take the final step and discontinue subject added entries altogether and "replace them with machine produced subject catalogs, where the work will be subject indexed and not the book." Mischo shows how this can be done.

9. LCSH: Ease of Use

Knapp, Patricia B. "The Subject Catalog in the College Library: An Investigation of Terminology," Library Quarterly 14 (1944): 214-228.

Bryant, Philip. "The Bath University Comparative Catalogue Study," Catalogue and Index No. 41 (Summer 1976): 6-8.

Bates, Marcia J. "Factors Affecting Subject Catalog Search Success," Journal of the American Society for Information Science 28 (1977a): 161-169.

Bates, Marcia J. "System Meets User: Problems in Matching Subject Search Terms," Information Processing and Management 13 (1977b): 367-375.

Library of Congress. "Computer Catalog Center Greeted with Enthusiasm," Library of Congress Information Bulletin 36 (Sept 23, 1977): 622-664.

Hosono, Kimio. "Demerits of the Library of Congress Subject Headings as Search Key at the Mechanized Post-Coordinate Information Retrieval System." In Japanese. Library and Information Science 15 (1977): 181-188.

Green, Marie. Independent Research Study of Subject Headings in the MARC Records. Topic: Woman. Unpublished essay, Syracuse University, School of Information Studies, ca. 1970.

Markey, Karen. Reearch Report on Analytical Review of Catalog Use Studies. Columbus, OH: OCLC, Inc., 1980. ERIC Document No. ED 186 041.

The cataloger can follow Haykin's rules, rationalized by Chan, and take to heart the introduction to the eighth edition, which for the first time added a detailed description of subdivision practice. Yet even the experts do not seem to be able to establish any consistency, as Bates points out in "System Meets User." The real victim of the LCSH list is the user. Subject catalog use studies have been adequately reviewed by Markey in a recent OCLC publication and will not be repeated here, but, as Perrine points out, it is not very flattering for LC that catalog familiarity is more advantageous than subject knowledge, which, it is said, can actually be a hindrance ("Imperfect Key," Section 8). In "Factors...," Bates has asserted that users have to be taught LCSH whether they are subject experts or not.

Knapp summarizes the principle of specific entry (by which LC does not always abide) and the type of material excluded from the catalog. Thus, teaching has had to be done on an individual basis, as there is no simple introduction to LCSH for the catalog user. It is particularly deplorable that good search strategies are difficult to design. (See also Atherton and Markey, Section 3.1; Dickinson, Section 3; and Daily, "Many Changes...," Section 2.3.)

Green reports that there is no fool-proof way to collect all material on one subject (in her case, "Woman") except by keyword. Hosono encountered problems when producing indexing terms from the breakdown of subject heading phrases. The Bryant and LC studies of catalog use in recent years point to very substantial changes which may have to be made as we move toward online public access catalogs.

CONCLUSION

In 1960, Frarey believed that "present subject cataloging theory and practice is based primarily upon tradition and assumption and does not reflect any clear understanding of function or purpose."[8] LCSH is a prime example of Frarey's thesis, yet one can argue that LCSH constitutes a thesaurus-like list and the criticism and research on the various features or elements of the LC list correspond to topics usually discussed in thesaurus development (see Soergel[9] and Lancaster[10]).

Scheerer[11], Angell[12], and Richmond[13] would like to see improvements from a classificatory and linguistic point of view. While it may seem impossible to rebuild LCSH as one huge thesaurus, some have thought a series of smaller, subject specific thesauri might be feasible, with relationships noted to connect the individual word lists loosely. Kim's principles could be useful "to explicate meaning (the reciprocal and reversible relationship between concepts and words) in such a way that in the process we may retrieve a subset element (document or documents) of that meaning."[14]

It seems clear from this review of the criticism that the Library of Congress, if it wishes to maintain a useful tool in the computer age, has to do something. Having rejected PRECIS indexing, the Library of Congress must undertake a major revision, involving top professionals, theorists, and users from all countries where LCSH is used.

Footnotes

[1]Lois Mai Chan. Library of Congress Subject Headings: Principles and Application. Research Studies in Library Science, 15. Littleton, CO: Libraries Unlimited, 1978, p. 14.

[2]Carlyle J. Frarey. "Subject Headings." In The State of Library Art, Vol. 1, Pt. 2. New Brunswick, NJ: Graduate School of Library Science, Rutgers-The State University, 1960, pp. 143-144.

[3]Julia Pettee. Subject Headings: The History and Theory of the Alphabetical Subject Approach to Books. New York: H. W. Wilson, 1946, p. 69.

[4]Paul S. Dunkin. Cataloging U.S.A. Chicago: American Library Association, 1969, p. 84.

[5]Frarey, op.cit. p. 144. "Only in 1941 were classification and the assignment of subject headings combined under one technical and administrative direction."

[6]Pauline A. Atherton. Putting Knowledge to Work: An American View of Ranganathan's Five Laws of Library Science. Sarada Ranganathan Endowment for Library Science, Series 2, 5. Delhi, India: Vikas Publishing House, 1973, pp. 107-108.

[7]James G Williams, Martha L. Manheimer, and Jay E. Daily, eds. Classified Library of Congress Subject Headings, Vol. 1. Books in Library and Information Science, 1. New York: Dekker, 1972, p. 20.

[8]Frarey, op.cit., p. 63.

[9]Dagobert Soergel. Construction of Thesauri. New York: Wiley, 1974.

[10]F. W. Lancaster. Vocabulary Control for Information Retrieval. Washington, DC: Information Resources, 1972.

[11]G. Sheerer. "Subject Catalog Examined," Library Quarterly 17 (1957): 192.

[12]Richard S. Angell. "Library of Congress Subject Headings: Review and Forecast." In Subject Retrieval in the Seventies: New Directions. Westport, CT: Greenwood Publishing Co. and University of Maryland School of Library and Information Services, 1972, pp. 143-163.

[13]Phyllis Allen Richmond. "Cats: An Example of Concealed Classification in Subject Headings," Library Resources and Technical Services 3 (1959): 102-112.

[14]Chai Kim. "Theoretical Foundations of Thesaurus Construction and Some Methodological Considerations for Thesaurus Updating," Journal of the American Society for Information Science (1973): 152.

APPENDIX I

Authors Represented

Name	Date of Publication	Section(s)
Alben, Alice Strong	1956	3.1
Angell, Richard S.	1972	2.2
Atherton, Pauline A.	1973	8
Atherton, Pauline A.	1978	3.1, 4, 8, 9
Austin, Derek (in Maltby, ed.)	1976	2.2
Aveney, Brian	1975	2.3
Avram, Henriette D.	1967	2.1
Balnaves, John (in Raynard, ed.)	1976	3.1
Bates, Marcia J.	1977(a)	9
Bates, Marcia J.	1977(b)	4, 8, 9
Berman, Sanford	1971(a)	7
Berman, Sanford	1971(b)	7
Berman, Sanford	1972/73	7
Berman, Sanford	1977(a)	7
Berman, Sanford	1977(b)	7
Berman, Sanford	1978	7
Brinkler, Bartol	1962	5.2
Bryant, Philip	1976	9
Buffalo and Eric County Public Library, Buffalo, New York	1975	7
Chan, Lois Mai	1972	5.1
Chan, Lois Mai	1973	6.1
Chan, Lois Mai	1977	3.1, 5.1
Chan, Lois Mai	1978	2.1
Christ, John M.	1972	3, 3.1
Cipola, Wilma Reid	1974	2.3
Clack, Doris Hargrett	1978	3.1, 8
Coates, Eric James	1953	2
Coates, Eric James	1960	2.3
Coen, James A.	1969	5.2
Cutter, Charles Ammi	1876	2

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Name	Date of Publication	Section(s)
Daily, Jay Elwood	1957	2.3, 4
Daily, Jay Elwood	1967	2.3, 9
Daily, Jay Elwood	1972	2.3, 4
Dewey, Harry (in Perreault, ed.)	1968	2.1, 2.3
Dickinson, Elisabeth	1974	7
Dickinson, Elisabeth	1976	3, 4, 9
Dornfest, Wilma	1975	8
Dunkin, Paul S.	1969	2
Dykstra, Mary	1978	2.2
Enyingi, Peter	1975	3.1
Ferrington, Gerda	1976	7
Ford, William T.	1975	3.1
Foskett, A. C.	1977	2
Frarey, Carlyle James	1951(54)	2.2
Frarey, Carlyle James	1960	2
Fussler, Herman H.	1977	2
Green, Marie	ca. 1970	9
Gull, C. D.	1948	6.1
Gull, C. D.	1949	6.1
Hardy, May G.	1952	2.3
Harris, Jessica Lee	1969	5, 6.1
Harris, Jessica Lee	1970	2.1
Haykin, David Judson	1951	2.1
Haykin, David Judson	1957	2.1
Hennepin County Library, Cataloging Section	1973	7
Hosono, Kimio	1977	9
Hudson, Judith A.	1970	5.2, 8
Hunt, Roslyn	1977	2.2
Iamele, Richard T.	1975	3.1
Immroth, John Phillip	1970	2.3
Immroth, John Phillip	1971	2.3
Kanwischer, Dorothy	1975	7

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Name	Date of Publication	Section(s)
Kesting, J. G.	1968	6.2
Knapp, Patricia B.	1944	9
Ladenson, Alex	1953	3, 3.1
Library of Congress	1975	2.1
Library of Congress	1977	9
Library of Congress	1978	2.2
Lilley, Oliver L.	1955	3.1
Lilley, Oliver L.	1958	2.3
Maltby, Arthur (ed.)	1976	2.2
McClure, Charles R.	1976	8
Manheimer, Martha L.	1972	2.3
Markey, Karen	1978	3.1, 4, 8, 9
Markey, Karen	1979	9
Markley, Anne Ethelyn	1950	8
Marshall, Joan K.	1971	7
Marshall, Joan K.	1977	7
Metcalfe, John W.	1957	2
Metcalfe, John W.	1976	2.3
Mischo, William H.	1977	8
Mischo, William H.	1979	2.2
Mostecky, Vaclav	1956	4
Olding, R. K.	1961	2.3
Patterson, Charles Darold	1971	2.3
Perreault, Jean (ed.)	1968	2.1, 2.3
Perrine, Richard H.	1967	8, 9
Perrine, Richard H.	1968	8
Pettee, Julia	1946	2, 8
Prevost, Marie	1946	3
Reich, Philippa	1949	3
Raynard, W. Boyd (ed.)	1976	3.1
Richmond, Phyllis A.	1959	4
Richmond, Phyllis A. (in Wellisch, ed.)	1977	2.2
Rydings, H. Anthony	1975	2.1

APPENDIX I (con'd)

Name	Date of Publication	Section(s)
Scheerer, George	1957	2.3
Schmierer, Helen F.	1977	2
Seely, Pauline A.	1953	3
Sinkankas, George M.	1972	4
Steinweg, Hilda	1950	3
Steinweg, Hilda	1979	3.1
Svenonius, Elaine (in Raynard, ed.)	1976	3.1
Svenonius, Elaine	1977	2, 2.1
Symposium on Subject Headings	1952	2
Taube, Mortimer	1948	6.1
Taube, Mortimer	1952	3.1
Tauber, Maurice F.	1952	2
Taylor, Jed H.	1961	2.1
U.S. Library of Congress, Catalog Division (see L)		
VanHoesen, H. B.	1944	2.3
Vatican Library	1948	2.1
Veryha, Wasyl	1972	5.2
Wang, Sze-Tseng	1973	5.1, 6.3
Weintraub, D. Kathryn	1979	2.2
Wellisch, H. H. (ed.)	1972	2.3
Wellisch, H. H. (ed.)	1977	2.2
Wellisch, H. H.	1978	5.2
Wepsiec, Jan	1978	4
White, John B.	1972	7
Williams, James G.	1972	2.3
Williams, Martha E.	1976	2.1
Wilson, Patrick	1979	8
Wilson, Thomas D. (ed.)	1972	2.3
Wright, W. E. (ed.)	1948	2.1

APPENDIX II

Publishers of Information and Criticism on LCSH

(A) Monographs

Publishers	Number of Items	Bibliographic Section
American Library Association	2	2, 2.1
Columbia University	6	2, 2.2, 2.3(3), 5
Dekker	1	2.3
Greenwood & University of Maryland	2	2.2, 2.3
Iowa State University Library	1	2.2
Libraries Unlimited	2	2.1, 2.3
Library Association (Australia)	1	3.1(2)
Library Association (UK)	1	2.3
Linnet Books	2	2, 2.2
University of Maryland	1	2.1, 2.3
Neal-Schuman	1	7
OCLC	1	9
University of Pittsburgh	3	2.3(2), 4
Rutgers University	1	2
Scarecrow	5	2, 2.1, 2.3, 3, 7
Syracuse University	2	3.1, 9
University of Woolongong	1	2.2
USGPO (or LC)	4	2, 2.1(2), 6.1
Vikas (India)	1	8
H. W. Wilson	2	2, 2.2
Xerox Microcard	1	3.1
Total	41	

APPENDIX II (con'd)

(B) Journals

Journal Titles	Number of Items	Bibliographic Section
American Documentation (now JASIS)	1	4
Australian Library Journal	1	2.3
Canadian Library Journal	2	7(2)
Catalogue and Index	1	9
Hennepin County Library Cataloging Bulletin	1	7
Information Processing and Management	1	9
JASIS	1	9
Journal of Academic Librarianship	2	8(2)
Journal of Cataloging and Classification (now LRTS)	5	2, 3(2), 3.1, 8
Journal of Documentation	1	2
Journal of Library Automation	2	2.1, 2.3
LACUNY Journal	1	8
Law Library Journal	1	3.1
Library and Information Science (Japan)	1	9
Library Journal	3	2.2, 2.3, 3, 7
Library of Congress Information Bulletin	2	2.2, 9
Library Quarterly	9	2(2), 2.1(2), 2.3(3), 3, 9
Library Resources and Technical Services (LRTS)	19	2.1(2), 2.2, 2.3, 3.1(3), 4(2), 5.1(2), 5.2(5), 6.1, 7, 8
Library Trends	1	3.1
Newsletter of Intellectual Freedom	1	7
RQ	2	8(2)
South African Libraries	1	6.2
Special Libraries	1	6.1
Unabashed Librarian	3	7(3)
Ugandan Libraries	1	7
Wilson Library Bulletin	3	3,7(2)
Total	67	

APPENDIX III

Subject Analysis: Summary Report of the Racism and Sexism in Subject Analysis Subcommittee to the RTSD/CCS Subject Analysis Committee*

INTRODUCTION

A 1976 ALA Resolution on Racism and Sexism Awareness directed RTSD, among other ALA divisions, to assist in the process of eradicating racial and sexual discrimination. In descriptive cataloging, efforts were made through RTSD to remove race- and sex-biased terminology from the Anglo-American Cataloging Rules. The charge was given to the Subject Analysis Committee to explore means of compliance with the ALA resolution with regard to subject headings and classification.

In June 1977 the Subject Analysis Committee responded by appointing the Ad Hoc Racism and Sexism in Subject Analysis Subcommittee. Its function was:

> To identify areas of classification systems and subject headings which require change pursuant to the July 1976 ALA Resolution on Racism and Sexism Awareness; to establish priority ranking for making these changes; and to report these findings to the Subject Analysis Committee for transmittal via the RTSD Executive Board, to the appropriate change-making organizations.[1]

The subcommittee held its first session at the 1978 Midwinter Meeting and conducted nine sessions through the 1979 ALA Annual Conference. Subcommittee members were Elizabeth M. Dickinson, chairperson, Jessica L. Milstead, Joan K. Marshall, Desretta V. McAllister, and Joyce N. Davis. In March 1979 Betty L. Brown was appointed to the subcommittee to fill the unexpired term of Joyce Davis.

The subcommittee used the same coverage as the ALA equal employment opportunity policy in determining the groups of people that would be studied with regard to subject analysis. This policy prohibits discrimination on the basis of race, sex, creed, color, national origin, lifestyle, or handicap. Thus, the scope of the subcommittee's work was broadened somewhat while remaining within the spirit of the Racism and Sexism Awareness Resolution. This larger pool of subject areas allowed research on the subject analysis of groups that have received very little attention to date.

Another important and guiding document for the subject committee was the set of "principles for establishing subject headings relating to people and peoples" drafted by Joan K. Marshall and outlined in On Equal Terms.[2] These guidelines have been approved and adopted in principle by the RTSD CCS Subject Analysis Committee.

The subcommittee's work was divided roughly into three categories:

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*RTSD Newsletter 6 (2) (April 1981): 21-22. Reprinted by permission of the publisher.

APPENDIX III (con'd)

1. Studies of LCSH to determine if there is need for change in headings related to peoples.

2. Analysis of placement of women and racial and ethnic minorities in the LC and Dewey classifications, and the terminology used for these groups.

3. Preparation of annotated bibliographies of materials on subject analysis and terminology for women and Afro-Americans. This approach was taken because considerable research had already been performed on these groups.

GENERAL RECOMMENDATIONS

1. There is considerable need for ongoing research in the area of subject analysis for materials related to people and peoples. This work should be done in library school programs and as an ongoing function of the Library of Congress and other authorities charged with maintenance of classification and subject heading schemes. The Subject Analysis Committee should examine research and recommend changes to the tools of subject analysis.

2. A set of principles should be developed to cover classification of materials relating to people and peoples. These principles could mirror those constructed by Joan Marshall for preparation of nonracist/nonsexist subject headings. We recommend that the Subject Analysis Committee develop these principles.

3. The potential of modern computer technology should be exploited to maintain subject terms in conformity with usage warrant. The relative infrequency of occurrence of words and phrases can be determined fairly easily; it is even possible to detect trends in terminology. We recommend that the Library of Congress undertake greater exploitation of computer technology to research terminology usage patterns.

4. The subcommittee wishes specifically to commend the use by the Library of Congress of research done by Joan Marshall and Doris Clack in the areas of subject analysis for women- and minority-related materials. These works should be used as guides in making subject heading and classification changes.

SPECIFIC RECOMMENDATIONS

Priority ordering. Specific recommendations listed below are in approximate order of the priority set by the subcommittee. Structural changes will have the greatest overall impact on subject headings and are thus of first importance. In terms of changes related to specific groups, the recommendations on senior citizens are more immediately visible and thus are recommended ahead of others. LC subject headings are more widely used than LC classification, and thus take some precedence. Updating of the H schedule, however, should be placed high on the LC agenda.

APPENDIX III (con'd)

For Subject Analysis Committee

1. Contact REFORMA and representative Mexican-American organizations to determine whether change is needed in subject headings for this group.

2. Continue the effort to find appropriate terminology to describe traditional concerns and customs. The subcommittee does not find the term primitive acceptable, at least with regard to Indian customs and activities.

3. Pay greater attention to classification and act more directly and positively as a change agent in this area. A stronger liaison role should be developed with the classification authorities for both LCC and DDC systems.

For Library of Congress

Subject Headings:

1. Analysis of the list of subject headings for improved structural consistency through greater synthesis of complex topics, additional scope notes, and redistribution of subdivisions so as to avoid negative connotations.

2. Abandonment of objectification.

3. Changes to AGED/OLD AGE/AGING sequence.

4. Changes concerning names of Indian groups and subheads applied to them.

5. Removal of subheads with negative connotations.

LC Classification:

1. Update H schedule.

2. Change treatment of peoples in E-F.

3. Make changes recommended for U schedule and use the study to make similar kinds of changes in other portions of the schedule.

LC in General:

1. Greater use of computer technology in analyzing needed subject heading changes.

2. Greater attention toward revision of LC classification schedules and indexes in general to remove bias regarding people and peoples.

APPENDIX III (con'd)

For Decimal Classification Editorial Policy Committee

1. Use of recommended changes to 305/306 for creation of an alternative schedule.

2. Breakup of indiscriminate groupings of women, slaves, and ethnic groups.

REFERENCES

[1]RTSD Manual of Procedures: Cataloging and Classification Section Committees--1979-80, Subject Analysis Committee, Subcommittee on Racism and Sexism in Subject Analysis (October 1979), p. R10.

[2]Joan K. Marshall, On Equal Terms: A Thesaurus for Nonsexist Indexing and Cataloging (New York: Neal-Schuman, 1977), p. 6-10.

NOTE: Queries on the subcommittee report may be directed to Elizabeth M. Dickinson, Stockton-San Joaquin County Library, 605 N. El Dorado St., Stockton, CA 95202. The full report has been submitted to ERIC; pending availability there, copies are available from Joan K. Marshall, Head of Technical Services, Brooklyn College Library, Brooklyn, NY 11210.

An Analysis of Vocabulary Control in the Library of Congress List of Subject Headings (LCSH)

by

Pauline Cochrane
and
Monika Kirtland

Abstract

The introductions in the first eight editions of LCSH are content analyzed to check what they tell the reader about the list's content, coverage, and Library of Congress practice in assigning subject headings. Fourteen different types of information about the list are compared, e.g., reference to sparsity of headings, filing arrangement, use of subdivisions, and classmarks. The appendices include reprints of the preface and introduction from the second and third editions of the American Library Association List of Subject Headings on which the first edition of LCSH was originally based, as well as the title pages, prefaces, and introductions to editions two through seven and nine of LCSH.

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ALA List of Subject Headings. Third edition, 1914. Preface 57

LC Subject Headings Used in the Dictionary Catalogues of the Library of Congress. Second edition, 1919. Preface 63

LC Subject Headings Used in the Dictionary Catalogues of the Library of Congress. Third edition, 1928. Preface 65

LC Subject Headings Used in the Dictionary Catalogues of the Library of Congress. Fourth edition, 1943. Introduction 68

LC Subject Headings Used in the Dictionary Catalogues of the Library of Congress. Fifth edition, 1948. Introduction 75

LC Subject Headings Used in the Dictionary Catalogues of the Library of Congress. Sixth edition, 1957. Introduction 82

LC Subject Headings Used in the Dictionary Catalogues of the Library of Congress. Seventh edition, 1966. Introduction 89

LC Subject headings Used in the Dictionary Catalogues of the Library of Congress. Eighth edition, 1975. (Not included. See note p.42)

LC Subject Headings Used in the Dictionary Catalogues of the Library of Congress. Ninth edition, 1979. Preface. Introduction 96

INTRODUCTION

Anything over three score and ten years old has a history that may or may not be considered honorable and reasonable to reveal. An army general or even a librarian of that age might be expected to sit in an armchair and write a volume of memoirs. But something like the Library of Congress List of Subject Headings (LCSH), which has reached that venerable age, has difficulty in tracing its early beginnings and pre-World War II developments, revisions, and changes because the last edition of LCSH (the 9th, 1980) does not record the history of changes in indexing practice and policy. Neither the introduction to the 9th edition nor the entries in that list will reveal what has gone before in the way that the indexer's edition of MESH[1] (Medical Subject Headings), published by the National Library of Medicine, records its indexing history (see Figure 1). The valiant efforts of Haykin[2] or Chan[3] do not help us, for they were written to illustrate practice, not to document it.

As we move into the online catalog stage of library development, we should become aware that the "crust of the past" must be scraped away to reveal the treasures of our libraries or our work in closing catalogs and using technology will be for naught. When users at an online catalog terminal ask, as they well might very soon, for items on the rights of women before 1970, they should be able to find this with little difficulty. But will the 9th edition of LCSH, which they probably will be using, help them? Unfortunately, no, because it does not reveal under **Women's Rights**, for instance, that the term for this concept before 1974 was **Women—Rights of Women.** Few catalogs, therefore, may have cross references linking these two as prior and current synonyms for indexing.

Figure 1. Entry in Medical Subject Headings (MESH) with History Note

DRUG DEPENDENCE
F3.709.597.285

76; hist of use: 1968 was **DRUG DEPENDENCE** see under **DRUG ABUSE.** 1969-1975 was **DRUG DEPENDENCE** see under **DRUG ADDICTION,** (pre MEDLARS)-1975 **DRUG ADDICTION** was main heading; IM + specific drug IM (without qualif); do not use /chem ind/dug eff/educ/instrum/physiol/rad eff; TN 56; differentiate from **DRUG ABUSE** (no physical dependence); **STREET DRUGS** is available

x **DRUG ADDICTION**
x **DRUG HABITUATION**
xr **NARCOTICS**
xr **SOCIAL PROBLEMS**

To begin to investigate the history of usage of LCSH headings and subdivisions over time, we undertook a straightforward comparison of the text of the introductory sections of LCSH, hoping to uncover a pattern and identify some critical times at which major changes were made, thinking this could be used as input to an online LCSH vocabulary control project. The test of these introductory sections from editions two through seven and nine are included in the appendix to this paper.* We gratefully acknowledge the cooperation of Mary K. D. Pietras, Chief of the Subject Cataloging Division at the Library of Congress, who made these sections available to us for reprinting. Upon her suggestion, we also included the historic text of the ALA List of Subject Headings (second and third editions, 1901 and 1914), which were the basis for LCSH, although we did not analyze these texts.

To help us understand the impact of the changes in policy and practice through the various editions, we have traced several headings through eight editions of LCSH to see how they fared over the years. If time had permitted, we would have conducted a further study to check actual usage over time at the Library of Congress and elsewhere. We did not have the time or resources to do this at the time of our investigation, or to report these findings still in preliminary form. Neither did time permit us to analyze the ninth edition of LCSH, which was published as we finished this paper. Nevertheless, it is included here for our readers to study and compare.

Some may argue that this retrospective memoir of vocabulary changes and indexing practices is unnecessary to launch a successful online library catalog. After all, the Library of Congress and other libraries, they might say, constantly revise and update their library's subject catalogs to take earlier material, once indexed under an obsolete heading, and re-enter all the entries under the new heading, making all necessary cross references. Our examination of several library card catalogs shows this not to be the case. And it is certainly not true of the COM catalogs we have seen (from Toronto, Georgia Tech, Western Australia Institute of Technology, Columbus Public Library, and elsewhere) which are generated from records for individual items. As we convert catalogs to new machine-readable files, we will need a separate vocabulary control project to peel away the crust of the past and identify the layers and their interrelationships. We probably will uncover unknown, undocumented, and often unrelated subject headings which are not recorded in the latest edition of LCSH or its online equivalent.

This paper is intended to illustrate the kind of vocabulary control problems awaiting us as we merge Library of Congress and other library records in online library catalog networks. This study paralleled the work we were engaged in at the time, namely, the

*The 75-page introduction to the eighth edition is not included in the appendix because it is readily available as a separate publication from the Library of Congress.

Vocabulary Improvement Project of ERIC, which was a decentralized project to review and revise the Thesaurus of ERIC Descriptors.[4] We hope that our study will stimulate a similar decentralized effort of review and revision of LCSH, and, eventually, result in adequate vocabulary control for our nation's online library catalogs.

We have analyzed the prefaces to the first eight editions of LCSH to note any changes in explanations about subdivisions, scope notes, classmarks, etc., over time. We also point out the increasing aid and instruction provided for the indexer and catalog user. More and more, such tools as LCSH and Thesaurus of ERIC Descriptors are becoming searchers' tools, and such explanations are essential.

To investigate the history of a single Library of Congress subject heading is not an easy task. Supplements are published to each edition of LCSH, which are consequently incorporated in the following edition, but the list is not cumulative as is MESH (see Figure 1). Cancelled terms, unless used as lead-ins ("see" references), disappear from the list. No "history" note is provided, so the adoption date for a term or dates of changes in subheadings, references, or class codes are never noted. Changes in status of a heading, from lead-in to approved heading and vice versa, are never indicated.

To explore the delineation of a heading over the years, it has been necessary to trace through all editions and supplements, and to check the actual use of the headings over the years in library collections which stretch over that period. This is an arduous task, and one we should never expect users and reference librarians to perform. But some effort will have to be expended to trace the availability of information on a topic over time in a library catalog. The studies and critiques of LCSH which we reviewed in the first part of this report document this weakness of LCSH.[5]

Comparison of the Introductory Text of the Library of Congress List of Subject Headings (Editions 1-8)

As Table 1 shows, a preface or introduction has been provided since the second edition of LCSH. From one page in length it has grown slowly into the 75-page introduction of the eighth edition. The Library of Congress has never claimed that the list is a perfect tool. Haykin admits quite frankly in the preface to the fourth edition that:

> Whatever measure of logic and consistency has been achieved in the headings is due to the continuity of oral tradition which stems from J. M. C. Hanson, Charles Martel, their associates, and the occasional written instructions issued by them. Headings were adopted in turn as needed. (p. iii)

From the sixth edition on, reference is made to David Haykin's Subject Headings: A Practical Guide, which, in itself, is only an attempt at documenting the oral tradition. The 14 columns of Table 1 attempt to analyze what was said and how it changed over time. Columns 1-8 are of a general nature, illustrating what was said about individual fields of knowledge, omitted subject headings, and other guides to be used with LCSH. (See also separate list of these as an appendix to Table 1.)

Columns 5-8 contain an analysis of the form of entries in the list. Explanations of "refer from" references, scope notes, classmarks, and filing arrangement are usually found in introductions to thesauri. We wondered what the Library of Congress would say and how they would say it. The blanks in these columns are very revealing (especially Column 8)!

To a large extent, the topics the prefaces deal with are type of subdivisions and form of subject headings, and topics suggested in American and British standards on thesaurus construction are not covered.[6] As the list is an extract of the subject headings used in the Library of Congress, a good part of the introduction has to be concerned with explaining practices at LC and how the printed list differs from the actual catalog, i.e., what has and has not been incorporated.

Three major omissions about practice have finally been incorporated and explained in the preface. In tying together practices over the entire 70 years, this explanation should be studied very carefully for online access to records of earlier vintages: the parenthetical remarks in Columns 10 and 14 point up how long it took to document practice.

The first omission involves the late introduction of certain entries in the list. The best example is the incorporation of lead-in ("see" references) and reciprocal cross-references (Column 5 in Table 1). Not until the list was in the fourth edition, about 40 years after the publication of the first, did these appear.

Another omission consists of explanations of actual practices regarding the use of the list. For example, LC class numbers have been used since the first edition, but were only made clear in the third edition (Column 7 in Table 1). Another example of this kind of omission has to do with subdivisions for famous people, exemplified with a few illustrious names, e.g., Washington, Napoleon, and Shakespeare. Although this was started in the printed list in the second edition (1919), there was no mention of it in the preface until the fifth edition in 1948 (Column 14 of Table 1).

After struggling in every edition to enlighten the reader about the use of subdivisions, the eighth edition finally printed a major explanation of practice and use (Columns 9-14).

Frequent references to long outdated auxiliary lists raise a question: If we were to have an online LCSH, would these lists need to be updated and incorporated? (See appendix to Table 1.)

One cannot deny the fact that the Library of Congress has tried in every edition to reveal something to librarians and catalog users about its subject heading list. But until very recently, this was not done too painstakingly, and, by and large, the prefaces have not been useful to the uninitiated user.*

Fifty years ago, the Library of Congress could justifiably point out that "at the time of the conceptualization of the subject heading list, no firm theory existed." This is no longer true. Many researchers have discussed the theory of subject headings within LCSH and their findings have been standardized into the modern thesaurus methods for vocabulary control. Research has been done on subject headings, thesaurus construction, and even LCSH in particular.[7] The preface of LCSH can reflect these new developments. For reasons pointed out in other parts of the paper, it appears the time has come to redesign LCSH and to write down clearly in its preface what principles are being applied. This will aid catalogers, users of library catalogs, and the system designers who are engaged in creating our online catalog access.

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*Note added in proof: The introductory text of the ninth edition, although not carefully analyzed by the writers due to insufficient time, appears to include more information of the nature suggested here. It is included in the appendices for the reader's analysis and study.

References

[1] Medical Subject Headings, Annotated Alphabetic List, 1978. Springfield, VA: NTIS, 1978. PB 255 932.

[2] David J. Haykin. Subject Headings: A Practical Guide. Washington, DC: U.S. Government Printing Office, 1951.

[3] Lois Chan. Library of Congress Subject Headings: Principles and Application. Littleton, CO: Libraries Unlimited, 1978.

[4] Barbara Booth. "A 'New' ERIC Thesaurus, Fine-Tuned for Searching," Online, (July 1979), 20-29.

[5] Monika Kirtland and Pauline Atherton Cochrane. LCSH: A Bibliographic and Bibliometric Essay Covering Critical Paper and Use Studies Written about LCSH. (Part I of this report.)

[6] Standards for Thesauri Construction. ANSI-Z39.19-1974, $5.00 (available from American National Standards Institute, New York); and BS5723:1979 (available from British Standards Institution, 2 Park St., London).

[7] Kirtland and Atherton, op. cit.

Table 1. COMPARISON OF THE INTRODUCTION TO EDITIONS OF LCSH

Edition (no. & date)	Reference to publication of separate lists for a single field of knowledge (1)	Remarks about sparsity of headings for certain fields of knowledge (2)	Mention of Subject Headings omitted (3)
1. 1910-14			
2. 1919		Religion, theology, foreign law.	Names of persons and places; names of societies, institutions; names of bodies of various kinds; systematic names of the lower divisions (families, genera, species) in botany and zoology; names of ships unless of special scientific or historical interest.
3. 1928		Same as above.	Same as above.
4. 1943	Reference made to "Library Subject Headings with List of Shakespeare Collections and Language Subject Headings." 5th ed., 1926.	Remark: "Headings not complete in all fields of knowledge."	1. Names of persons, with the exception of Lincoln, Napoleon, Shakespeare, and Washington. These names are included in order that the numerous subdivisions under them might be shown. 2. Names of corporate bodies, such as societies, institutions, firms, except where used in examples cited under some subject. 3. Names of places, except where they form an integral part of other headings or when subdivisions under them must be shown, as in the case of historical periods. In the latter case, period subdivisions are not given when they cover the reign of an individual ruler. The period subdivisions under Foreign relations and Politics and government largely correspond to those under History and are omitted. 4. Systematic names of the lower divisions in botany and zoology (families, genera, and species) and references from scientific to popular names. 5. Names of individual chemical compounds. 6. Names of ships, except those of special historical or scientific interest. 7. Headings with unusual diacritical marks, partly because of the difficulty of typesetting. 8. Names of all religious bodies, except those of major importance or interest. 9. Names of special prayers, e.g., Anima Christi, Ave Maria. 10. Many of the names of individual deities.
5. 1948	Same as above.	Emphasis on Music headings.	Same as above, with #7 omitted.
6. 1957	Same as above.	Emphasis on Music headings and refers to "Music Subject Headings" 1952.	Same as above.
7. 1966	Separate list of "Names of Political and Geographical Entities" used.		Same as above, plus: (2) family names; (3) most sacred books, anonymous classics, or special prayers; (5) natural features, e.g., bays, capes, deserts, lakes, etc.; (6) structures such as aqueducts, bridges, canals, dams, reservoirs, buildings, castles, lighthouses; (7) metropolitan areas, such as parkways, roads, squares, streets, cemeteries; (9) parks, forests, forest reserves, wildlife refuges.
8. 1975			Same as above, plus: archaeological files, works of art, motion pictures, and TV programs; chemical compounds. Although a large number of existing music headings have been printed in the current edition, in the future it will not be printing all examples of subject headings with qualifiers specifying instruments or vocal parts when the main heading has a general SN.

Table 1. (con'd)

Edition (no & date)	Guides* other than introduction (4)	"Refer from" references explained (5)	Scope Notes (6)	Classmarks mentioned (7)	Filing arrangement explained (8)	What general forms of subdivisions are omitted and/or given (9)
1. 1910-14						Bound in at end. Preliminary List of Language Subdivisions.
2. 1919	Reference made to 4th issue (1916) of "Subject Subdivisions."					General form divisions (e.g., directories, periodicals, societies, etc.) omitted, but more important subdivisions of subjects are included.
3. 1928	Reference made to 6th issue (1924) of "Subject Subdivisions."			Used since 1st edition, mentioned in introduction of 3rd edition for the first time.		Same as above.
4. 1943	Same as above.	Given for first time, but as separate list. "Has been a long standing practice in LC catalogs."	Introduced.	Same as above.		Same as above.
5. 1948	Same as above.	Same as above, plus Symbols X and XX are used from now on and interfiled.	Same as above, explained.	Same as above.		Same as above, plus language subdivisions have been given in full under English language only.
6. 1957	Haykin: "Subject Headings: A Practical Guide."	Same as above.	Same as above.	Same as above.		"Material is printed under specific heading or references are given in this edition." List of general form divisions given, ½ p.
7. 1966	Same as above.		Same as above.	Same as above.		List of subdivisions used in the LC catalog under any subject heading as required.
8. 1975	Same as above.	Three pages of explanations.	Same as above.	Same as above.	Explained for the first time.	

*See Table 1 Appendix.

Table 1. (con'd)

Edition (no. & date)	Mention of Subject Headings with local subdivisions (10)	Explanation of direct/ indirect subdivisions (11)	Period subdivisions under names of places (12)	Historical subdivisions (13)	Full lists of subdivisions for Lincoln, Napoleon, etc. (14)
1. 1910-14					
2. 1919	2nd edition of "Subject Headings with Local Subdivisions..." could be used, but not referred to.			Under names of countries only historical subdivisions included.	In existence in 2nd edition and on.
3. 1928	Reference made to 4th edition (1925) of "Subject Headings with Local Subdivisions..."			Same as above.	
4. 1943	Reference made to 5th edition (1935) of "Subject Headings with Local Subdivisions..."			Same as above, but with the exception of the U.S.A.	
5. 1948	Same as above, plus "Included is a list of local subdivisions which are used as direct subdivisions of a subject."	Introduced, but has always been practiced.		Same as above, but subdivisions used under countries are given in full under U.S. only.	Introduced.
6. 1957	"Material integrated into list by the insertion of Direct or Indirect and by the inclusion of Part C following the Introduction." Also, "Areas and Localities used as Direct Subdivisions," 2/3 p.		Refers to "Period Subdivisions under Names of Places"		
7. 1966	Same as above.	Same as above.	Same as above.		
8. 1975	Same as above, plus: Explains Topical, Form, Period, and Local Subdivisions. Has a chapter on Headings Serving as Pattern for Subdivisions. Lists include "Subdivisions under Place Names," "Most Commonly Used Subdivisions," with explanations of how they are used for many. (54 pp.)*				

*These remarks apply to Columns 10-14.

Table 1
Appendix

*Guides cited in LCSH Preface:

(1) U.S. Library of Congress Catalog Division.

Subject Subdivisions

(A) Under names of country, states, etc.
(B) Under names of cities
(C) Under general subjects

2nd issue	1906
4th issue	1916
5th edition	1920
6th edition	1924

(2) U.S. Library of Congress Catalog Division.

Subject Headings with Local Subdivisions

(A) Headings with indirect subdivision
(B) Headings with direct subdivision
(C) List of local subdivisions (state, province, etc.) to which subdivision is always direct

3rd edition	1920
4th edition	1925
5th edition	1935

(3) U.S. Library of Congress Catalog Division.

Period Subdivisions under Names of Places

1950

(4) U.S. Library of Congress Catalog Division.

Library Subject Headings with List of Shakespeare Collections and Language Subject Headings. Preliminary list.

5th edition 1926

(5) Names of Political and Geographical Entities (n.d.).

(6) Music Subject Headings.

1952

APPENDIX:

Introductory texts
to
ALA List of Subject Headings,
Second and Third Editions,

and
LCSH, Editions 2-7 and 9

LIST OF

SUBJECT HEADINGS

FOR USE IN

DICTIONARY CATALOGS

PREPARED BY A COMMITTEE
OF THE
AMERICAN LIBRARY ASSOCIATION

SECOND EDITION, REVISED

WITH AN APPENDIX
CONTAINING HINTS ON SUBJECT CATALOGING AND SCHEMES FOR SUBHEADS
UNDER COUNTRIES AND OTHER SUBJECTS

THE LIBRARY
OF CONGRESS

PUBLISHED FOR THE A. L. A. PUBLISHING BOARD
BY THE
LIBRARY BUREAU, 530 ATLANTIC AVE., BOSTON, MASS.
1901

PREFACE.

THIS List of subject headings has been prepared for the cataloger and is to be considered as an appendix to Cutter's Rules for a dictionary catalog, ed. 3, sections 99 to 120.

Every compiler of a dictionary catalog finds two great difficulties: 1st, the choice between synonymous or related headings; 2d, the making of the necessary cross-references. The best catalogs show great diversity of usage and it has often been suggested that, by a collation of these catalogs, a list of subject headings might be made which would simplify the work of the cataloger and lead to more uniformity. At the Lakewood conference of the American Library Association a committee for this purpose was appointed. At the Chicago conference the committee reported progress and the Publishing Section was instructed to proceed with publication as soon as possible. At the Lake Placid conference the committee reported completion of the work, and it is now submitted to the members of the A. L. A and other librarians for approval. The catalogs on which the list is based are those of the Boston Athenæum, Peabody Institute and Cleveland Public Library, the American catalog, and the Harvard Subject index.

Of course no such list can be complete, nor is this intended to be so. It is limited to the headings most often needed in the small or medium sized public library. The following classes of headings have been omitted:

1. Personal names.

2. Geographical headings, such as names of countries, places, languages, literatures, etc. [See Library journal, 18:C79–80, for treatment of these.*]

3. Technical and scientific names, unless there are equivalent common names and for purposes of cross-reference.

4. Animals and plants and chemical and medicinal substances.

5. Books and other parts of the Bible. These should be entered as subheads under Bible, with reference from their names.

6. The following special classes: Names of months, days, processes in arithmetic, parts of speech, virtues and vices, diseases, headings beginning with numbers (as Eighteenth century).

7. Other *specific* headings where there seemed to be no doubt as to name or references, as most games, foods, etc.

It is thought that the list is sufficiently full for ordinary use. The headings for any new subject can be settled by the application of the rules given

*See also Appendix G.

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below and by the analogies of headings already in the list. For full discussion of principles the cataloger is referred to Cutter's Rules. Any cataloger having to deal with unusual books will consult special catalogs or reference books, such as the Surgeon-General's Catalog, Soule's Lawyers' reference manual, Bouvier's Law dictionary, M'Clintock and Strong's Cyclopædia, etc.

The general principle of decision is that the heading shall be that under which it is supposed that the majority of educated Americans will look, with cross-references from other forms of heading.

In carrying out this principle the following rules have been followed so far as possible:

1. Use common names instead of technical, English instead of foreign; but not if the common or English name is ambiguous or of ill-defined extent.

2. Use singular rather than plural except where subjects are only thought of under the plural.

3. Use headings most generally found in the leading catalogs. Usage, however, is changing; Moral philosophy, for example, is now almost universally called Ethics.

4. Put compound names under the first word unless some other is more significant (Agricultural botany, rather than Botany, agricultural; but History, ancient, rather than Ancient history).*

In order that all the books on a subject may be brought together in the catalog, cross-references must be liberally supplied. For this reason the list of "see-alsos" is especially full.

Particular attention is called to the "refer-froms." These are the "see-alsos" reversed and group under each heading the references that should be made from other subjects. Of course these references are not to be made unless the book cataloged actually illustrates the subject from which reference is made. They are suggestions rather than directions, and do not relieve the cataloger from using his judgment.

It has not always been thought necessary to include in the list obvious "refer-from" references where the headings stand side-by-side in the alphabetical arrangement. For example, from Agriculture to Agricultural botany, pests, etc.

It will of course be understood that where the reference is simply "*See*," no subject entries are to be made under the heading referred from.

One column is left blank for additions. The cataloger is advised to check headings and references as used and to add new headings required. If he wishes to use a different form of heading, it will be necessary to make the change wherever the heading occurs in the list, otherwise discrepancies will creep into the catalog. By this method a complete list of all the subject headings and references in the catalog will be at hand without reference to the catalog itself.

* *Minority report.* C. A. Cutter prefers Ancient art, Ancient geography, Ancient history; Classical antiquities, Classical art, Classical biography, Classical geography, Classical history; as he would prefer Medieval antiquities, Medieval art, Medieval geography, and Medieval history, if in that case the substantive Middle ages were not better.

In this he follows the principle of *concrete cataloging*, which brings together what relates to a thing, a country, a period, rather than all works belonging to a class or form, such as Geography, History.

PREFACE

Unless the library is quite small, personal and geographical headings should be kept on slips as a supplementary list.

When there is a great accumulation of entries under a heading, it is well to subdivide. The Boston Athenæum and Peabody Institute catalogs furnish good models for such subdivision. [*See also* Appendix.]

We do not expect that this List of subject headings will be considered final or escape criticism. If, however, the general scheme of the work receives the approval of librarians, it forms a basis upon which a revised edition can more easily be prepared. We shall be satisfied with our labors if the result is found useful to catalogers, especially to beginners.

GARDNER M. JONES,
G. E. WIRE, M.D., LL.B.,
C. A. CUTTER,
Committee.

SALEM, MASS., July 22, 1895

LIST OF

SUBJECT HEADINGS

FOR USE IN

DICTIONARY CATALOGS

PREPARED BY A COMMITTEE
OF THE
AMERICAN LIBRARY ASSOCIATION

THIRD EDITION
REVISED BY
MARY JOSEPHINE BRIGGS

AMERICAN LIBRARY ASSOCIATION
PUBLISHING BOARD
CHICAGO
1914

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PREFACE

THE history of a list of subject headings for the use of cataiogers dates back to the Lakewood conference of the American Library Association, in 1892, when a committee consisting of Mr. Gardner M. Jones, Dr. G. E. Wire and Mr. C. A. Cutter was appointed for the purpose of collating catalogs and compiling from this information a list of subject headings which should represent the most approved usages. At the Chicago conference of the following year the committee reported progress, and the Publishing Section of the American Library Association was instructed to proceed with publication as soon as possible. At the Lake Placid conference, in 1894, the committee reported completion of the work, which was printed the next year. Three years later a second and somewhat revised and enlarged edition was issued and stereotyped, and this edition has been steadily in use by catalogers for the past thirteen years.

The growth and development of libraries, their increased use by the public and the many commercial, scientific and economic changes which have taken place of late, have long since made a new and thorough revision of this List of subject headings advisable. A steady demand for the second edition showed that the book was in very general use in libraries throughout the country. In 1906 the Publishing Board appointed, to take up the matter of a new edition, an advisory committee consisting of Mr. Gardner M. Jones, Miss Harriet B. Prescott, Mr. A. G. S. Josephson, Miss Margaret Mann, Miss Linda M. Clatworthy, Mr. J. C. M. Hanson and Miss Electra C. Doren. Later Miss Alice B. Kroeger and Miss Nina E. Browne were added to the committee. Miss Doren was unable to serve.

Miss Esther Crawford, a cataloger and library worker of much experience, was employed as editor for the new edition, and the work of collecting data and collating and comparing catalogs and catalogers' forms was begun late in 1906. After laboring with great diligence for more than two years and securing a large amount of material, Miss Crawford resigned in July, 1909, and the Board was fortunate in securing the services, in May, 1910, of Miss Mary J. Briggs, cataloger of the Buffalo public library, to carry the work to completion. Besides a trained knowledge of precisely what this bibliographical tool should be, Miss Briggs has brought to bear a most conscientious and painstaking care that only those can fully appreciate who have undertaken a similar task.

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INTRODUCTION

IT has been found necessary to omit much that was comprised in the original plan for the third edition of the List of subject headings, in order that the size of the book might be kept within reasonable limits. The scope has been broadened by the inclusion of some of the more important historical events, including wars but not battles, the chief languages, literatures and ethnic races, and subheads for many of the larger subjects.

Technical and scientific terms, chemical and medicinal substances, animals and plants, virtues and vices, diseases, games, foods and other specific headings are included somewhat more liberally than in the second edition, the aim being to provide a checklist in these subjects for the smaller public libraries.

The following classes of headings are omitted:

1. Personal names.
2. Geographical names, except for a few regional headings and countries requiring historical subdivisions.
3. Names of months, days, processes in arithmetic, parts of speech.

In general, and particularly in the matter of subdivisions, the needs of the moderately large public library, of from 100,000 to 200,000 volumes, have been considered. No attempt has been made to meet the needs of college, technical or special libraries, which must of necessity make finer distinctions and closer subdivisions than would be useful in a popular library.

The catalogs most consulted in the revision are those of the Library of Congress, the John Crerar library, Columbia university library, Nebraska university library, Northwestern university library, and the public libraries of Brooklyn, Buffalo, Chicago, Cleveland, Dayton and Pittsburgh. Among indexes, the Readers' guide to periodical literature and Engineering index may be specially mentioned.

The headings of the second edition have been retained, except for such changes as have seemed desirable in order to conform to present use of terms. The more radical changes have been made in response to what seemed to be a very general demand, expressed by a decided majority of

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the answers to questions published in the library periodicals and in personal interviews.

For the sake of uniformity, in choice of new terms the Library of Congress headings have been followed so far as they have seemed adapted to the use of popular libraries, omitting of course many subdivisions and technical terms which would be useful only in special or very large libraries.

In spelling, the simplified forms of the second edition have been retained, and a few others added, but it has not been thought best to advance in this line faster than generally accepted usage will warrant. The plural form is used rather than the singular, except where subjects are generally thought of under the singular. The singular form is used for fruits, in order that the same heading may cover both fruit and tree. The arrangement of compound words has occasioned so much perplexity to both makers and users of catalogs, that the hyphen has been eliminated as far as possible, following the latest available authority, Webster's new international dictionary.

Little has been attempted in the way of definition of headings beyond an occasional explanatory word or phrase. Space could not well be spared for many definitions, and it has been found difficult to frame them so as not to limit the subjects too closely. Therefore, except in a few cases where the meaning is very ambiguous, it has been left for the references to suggest the scope of the heading when not entirely self-explanatory.

As a concession to the very general tendency to look under the form rather than under the language for English dictionaries, grammars, etc., the English language has been made an exception to the regular treatment of languages, and several forms, e.g. dictionaries, grammar and spelling, entered directly under the form. The subheads for other languages are given under German language, and the same can be used for English in libraries where it is preferred that all material regarding that language be kept together.

All form names in American and English literature are included in the list, but of other literatures only those most likely to occur in popular libraries of moderate size. Literature, drama, essays, fiction and poetry are entered under the adjective; other forms under the form followed by the adjective name of nationality, except periodicals and newspapers where name of country is used: e.g. English literature; Humor, English; Periodicals — England. Reference should be made in every case from the country to the language and literature of that country. These references are indicated in the list for American literature and English language and literature only.

The subdivisions formerly printed in the appendices, except those for

cities which follow the introduction, are now included in the main alphabet. Country subheads are given under United States, in order that the many references may be indicated. The Library of Congress Preliminary list of subject subdivisions under countries and cities has been used as a basis, with modifications to adapt it to the needs of popular libraries.

Many subjects formerly subheaded under country are now referred to the subject with country subdivision. It is better as a rule to keep all matter relating to a city together, making double entry under city and subject when needed: e.g. Boston — Education; Education — Massachusetts; or, in a small library, Boston; Education; without subdivision.

The number of subdivisions to be used will, of course, vary with the size and character of the library. The small library will ignore the subheads for the most part, using them only for the largest countries, and for subjects upon which it may chance to possess considerable material. It will be easy to add subheads at any time, should material increase so as to require them. It is advised that a list of subheads used be placed at the beginning of each divided subject, and each subhead should have its own guide.

Since form subheads may be used with any subject having sufficient literature, no attempt has been made to indicate headings requiring such subdivision. At the end of the introduction will be found a list of forms applicable to any such subject. Under United States are given references to most subjects which will require country subdivision in public libraries, and under some of the more important subjects, examples of country subdivision are given, e.g. Education — U. S.

Experience has shown that the average reader generally disregards both logic and punctuation in consulting an alphabetically arranged card catalog. For this reason, all subdivisions, whether form, geographical or logical, and all inversions are arranged in one alphabet, regardless of punctuation, except only the period subdivisions of history, which are arranged chronologically. Since in this work the main entry word is not repeated, the punctuation for subjects subdivided is not indicated in the main alphabet. The dash is advised for all subdivisions, and, if preferred, may be used instead of the comma for inversions, e.g. Bacteriology — Agricultural.

To avoid confusion in checking, the *refer from* references have been printed in parallel columns at the right of the page. The references have been revised, many new ones added, and some, believed to be unnecessary, have been dropped. *See* references among the *refer froms* are indicated by (s). The possibilities of useful references are by no means exhausted in this list. Further references will suggest themselves in cataloging.

The best material on a specific subject is often found in a work upon a larger subject, so general in its nature that it is not advisable to analyze it.

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References are therefore made from the specific to the general in cases where most general works can be expected to contain material on the specific subject. Care should be taken not to make a reference of this kind unless justified by the works actually in the library. If the books on arts and crafts contain nothing on mosaics, a reference from Mosaics to Arts and crafts would be useless and misleading. The same principle applies to other references, which should not be made in any case unless the book cataloged is of interest in connection with the subject from which reference is made. If the books entered under Cemeteries are descriptive only, no reference from Eminent domain to Cemeteries is required.

It will of course be understood that where the reference is simply "*see*" no subject entries are to be made under the heading referred from. Only those headings printed in bold-faced type are intended to be used for subject entries.

In many cases references are indicated to or from geographical headings, or subjects with geographical subdivision, which do not appear in the main alphabet. These are only suggestive of the possibilities for this kind of reference. References should be made from periods of history, arts, sciences and other subjects to names of people whose lives are of interest in connection with the subject.

Long lists of references to specific subjects may be avoided in some cases by general references, as for instance under Industrial arts and under Manufactures "*See also* names of industries"; but if there are few specific entries it is better to enumerate them, that the reader may see at a glance where further material may be found. Another method of shortening the lists of references is to refer from the most general to the next less inclusive heading, and from the latter to the next lower: e.g. Zoology *see also* Vertebrates; Vertebrates *see also* Mammals; Mammals *see also* Carnivora; and so on to the specific animal. As zoological families and genera are not included in this list, references have been made from orders to specific animals.

The references in a card catalog are more easily read if arranged in columns rather than in a solid paragraph, with two or three columns on a card according to the length of the headings.

The cataloger is advised to check headings and references as used and to add new headings required. If he wishes to use a different form of heading, it will be necessary to make the change wherever the heading occurs in the list, otherwise discrepancies will creep into the catalog.

The aim has been to choose such headings as shall make the catalog a useful tool in enabling the reader to find as quickly as possible the book he desires. To attain this end, consistency has sometimes been sacrificed to utility.

MARY JOSEPHINE BRIGGS.

LIBRARY OF CONGRESS

SUBJECT HEADINGS

USED IN THE DICTIONARY CATALOGUES

OF THE

LIBRARY OF CONGRESS

SECOND EDITION

WASHINGTON
GOVERNMENT PRINTING OFFICE
LIBRARY BRANCH
1919

PREFACE

The printing of the first edition of the Library of Congress list of subject headings was begun in the summer of 1909, and completed in March 1914. In connection with that edition there were issued, as occasion required, supplementary lists (Additions and revisions) the last one, no. 14, appearing in November 1917. In view of the exhaustion of stock of the first edition a year or two after completion, a new edition was decided upon in 1916. It was more than a year, however, before the work was ready for publication, the first instalment reaching the printer early in 1918. The first edition was edited by Miss Mary M. Melcher to the end of the letter K, and completed by Miss Mary W. MacNair, editor of the second edition.

The organization of the catalogue to which the list in a measure forms a guide, the determination of the principles and methods to be followed in its construction and their successful application in the development of the subject catalogue are due to Mr. J. C. M. Hanson, chief of the Catalogue Division 1897–1910, assisted by the labors of his associates.

The list covers subjects in all branches of knowledge so far as the cataloguing of the corresponding classes of books in the Library of Congress has progressed. Subjects belonging to religion and theology and to foreign law are but sparsely and irregularly represented owing to the fact that the assignment of such subject headings has been discontinued until the reclassification of these classes shall have been completed and their systematic recataloguing is well in hand. For the completion of that work no definite date can be assigned. The reclassification of theology is still in progress, that of foreign law has not been touched. Experience has shown that it is inexpedient to let recataloguing follow the classification too closely before the whole class has been completed, remainders have been disposed of, and moot questions concerning difficult details satisfactorily settled.

The names of persons and places are ordinarily omitted from the list, also names of societies, institutions, and bodies of various kinds, and systematic names of the lower divisions (families, genera, species) in botany and zoology. The names of ships are excluded unless of special scientific or historical interest. While the more important subdivisions of subjects are included in the list, the general form divisions, such as Directories, Periodicals, Societies, etc., which may properly be used under any subject requiring them, are, as a rule, omitted. (A list of these form subdivisions can be found on p. 19 of the "Preliminary list of subject subdivisions," 4th issue, 1916.) Under names of countries only history subdivisions are ordinarily included.

The printing of a heading in black-face type indicates local subdivision. The numbers, combined with letters, which follow the subject headings are the classmarks and subdivisions showing where the material dealing with these subjects is classified in the Library of Congress. In the matter of hyphens, the Century dictionary has been used as authority.

December, 1919 C. M.

LIBRARY OF CONGRESS

SUBJECT HEADINGS

USED IN THE

DICTIONARY CATALOGUES

OF THE

LIBRARY OF CONGRESS

EDITED BY

MARY WILSON MacNAIR

CATALOGUE DIVISION

THIRD EDITION

UNITED STATES

GOVERNMENT PRINTING OFFICE

WASHINGTON

1928

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PREFACE

The printing of the first edition of the Library of Congress list of subject headings was begun in the summer of 1909 and completed in March, 1914. In connection with this edition there were 14 supplementary lists issued, the last one appearing in November, 1917. The second edition was published in 1919; three supplements followed this edition, issued in 1921, 1922, and 1924, respectively. The present (third) edition incorporates the headings given in the first and second editions and supplements, with additional headings to December, 1927. The first edition was edited by Miss Mary M. Melcher to the end of the letter K, and completed by Miss MacNair, editor of the second and third editions.

The organization of the catalogue to which the list in a measure forms a guide, the determination of the principles and methods to be followed in its construction, and their successful application in the development of the subject catalogue are due to Mr. J. C. M. Hanson, Chief of the Catalogue Division, 1897–1910, assisted by the labors of his associates.

The list covers subjects in all branches of knowledge so far as the cataloguing of the corresponding classes of books in the Library of Congress has progressed. Subjects belonging to religion and theology and to foreign law are but sparsely and irregularly represented, owing to the fact that the assignment of such subject headings has been discontinued until the reclassification of these classes shall have been completed and their systematic recataloguing is well in hand. For the completion of that work no definite date can be assigned. The reclassification of theology is still in progress; that of foreign law has not been touched. Experience has shown that it is inexpedient to let recataloguing follow the classification too closely before the whole class has been completed, remainders have been disposed of, and moot questions concerning difficult details satisfactorily settled.

The names of persons and places are ordinarily omitted from the list, also names of societies, institutions, and bodies of various kinds, and systematic names of the lower divisions

(families, genera, species) in botany and zoology. The names of ships are excluded unless of special scientific or historical interest. While the more important subdivisions of subjects are included in the list, the general form divisions, such as Directories, Periodicals, Societies, etc., which may properly be used under any subject requiring them, are as a rule omitted. (A list of these form subdivisions can be found on pages 23–24 of the list of Subject subdivisions, sixth edition, 1924.) Under names of countries only history subdivisions are ordinarily included.

The printing of a heading in black-face type indicates local subdivision. In the matter of hyphens the Century dictionary has been used as authority.

The numbers, combined with letters, which follow the subject headings are the classmarks and subdivisions showing where the material dealing with these subjects is classified in the Library of Congress; pending the eventual publication of a complete general index to the Classification schedules, the list may therefore serve to a limited extent as a substitute.

C. M.

DECEMBER, 1927.

THE LIBRARY OF CONGRESS

SUBJECT CATALOGING DIVISION

SUBJECT HEADINGS

USED IN THE DICTIONARY CATALOGS OF

THE LIBRARY OF CONGRESS

Edited by MARY WILSON MACNAIR

Fourth Edition
Volume I

WASHINGTON, D. C.

1943

INTRODUCTION

THE LIBRARY OF CONGRESS list of subject headings has grown by a slow process of accretion. New headings were added to it as they were adopted in the course of cataloging the Library's books. There was not, to begin with, a scheme or skeleton list of headings to which additions could be made systematically, completing and rounding out a system of subject headings for a dictionary catalog. Such a scheme could not have been devised at the time the Library's dictionary catalogs were begun, because there was no solid body of doctrine upon which it could be based; the guiding principles which were then in print for all to read and apply were very meager and concerned themselves with the form of headings and their choice. They did not provide the theoretical basis for a system of headings. Whatever measure of logic and consistency has been achieved in the headings is due to the continuity of oral tradition which stems from J. M. C. Hanson, who was Chief of the Catalog Division from 1897 to 1910, Charles Martel, Chief from 1912 to 1930, and their associates in the Catalog Division, and the occasional written instructions issued by them. The failures in logic and consistency are, of course, due to the fact that headings were adopted in turn as needed, and that many minds participated in the choice and establishment of headings. A growing awareness of the need of a statement of principles and rules of practice in subject cataloging has tended to correct deviations from logic and consistency and has led to the gradual improvement of the headings in the Library's catalogs.

Editions of the List

The first edition of the list of subject headings was issued in parts over the period from May 1909 to March 1914 and was supplemented by 14 additional lists extending to November 1917. The second edition was published in 1919 with three supplements following in 1921, 1922, and 1928, respectively. The third edition followed in 1928 with cumulative supplements in 1931, 1933, 1935, and 1938, each incorporating a series of more frequent noncumulative supplements. The fourth edition includes all the headings which appeared in the previous editions, the cumulative supplements to the third edition, and the quarterly supplements following the fourth cumulative supplement, through December 1940. A feature of the fourth edition not found in previous editions is the special section listing the so-called *refer from* references. Under each heading in this list are indicated the subjects *from* which either *see* or *see also* references have been made to the heading in question, as well as those under which it has been used as an example. A record of these references has always been available in manuscript form to members of the staff of the Library. It is being incorporated in the present edition in response to requests from other libraries. Although it was prepared as a separate list, it would have been incorporated in the main list of headings, if it had not been for the certainty that this would delay publication.

Classes of Headings Omitted

Not all of the subject headings used in the dictionary catalogs of the Library are, however, included in the list. Of the following categories omitted from the list, only those headings have been retained which have appeared in earlier editions:

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1. Names of persons, with the exception of Lincoln, Napoleon, Shakespeare, and Washington. These names are included in order that the numerous subdivisions under them might be shown.
2. Names of corporate bodies, such as societies, institutions, firms, except where used in examples cited under some subject.
3. Names of places, except where they form an integral part of other headings or when subdivisions under them must be shown, as in the case of historical periods. In the latter case period subdivisions are not given when they cover the reign of an individual ruler. The period subdivisions under *Foreign relations* and *Politics and government* largely correspond to those under *History* and are omitted.
4. Systematic names of the lower divisions in botany and zoology (families, genera and species) and references from scientific to popular names.
5. Names of individual chemical compounds.
6. Names of ships, except those of special historical or scientific interest.
7. Headings with unusual diacritical marks, partly because of the difficulty of typesetting.
8. Names of all religious bodies, except those of major importance or interest.
9. Names of special prayers, *e. g.*, *Anima Christi*, *Ave Maria*.
10. Many of the names of individual deities.

Characteristics of the List

The headings which in the catalogs of the Library of Congress have local subdivisions are printed in boldface type, *e. g.*,

Abbeys. This serves to show that works on abbeys in England, in France, etc., are entered in the catalogs under the respective headings Abbeys—England, Abbeys—France, etc. Following each heading in boldface type is a statement indicating whether local subdivision is direct, *e. g.*, **Retail trade**—*El Paso, Tex.*, or indirect, *e. g.*, **Geology**—*Germany*—*Westphalia*.

Enclosed in parentheses immediately following many of the headings are symbols made up of letters and Arabic numerals which are sometimes preceded by a qualifying word or phrase. These symbols are class numbers showing where material on the subject is classified in the Library of Congress. They are not in every case equivalent to the subject, but are merely suggestive and should be used only where the subject matter of the book justifies it. The words and phrases preceding the class number within the parentheses are merely explanatory and are not intended to represent a form of subject heading.

Subdivisions of a subject are printed in italics. Although the more important subdivisions are included, the general form divisions, such as Directories, Periodicals, Societies, etc., which may be used under any subject as required, have as a rule been omitted. Under names of countries, with the exception of the United States, only subdivisions for historical periods are given.

Interspersed among the subject headings are references from forms of headings not used in the Library's catalogs to those used in their stead. These forms of headings not used are recorded in the *refer from* section of the list under the headings to which they refer.

Following a great many headings are listed related headings or types of headings to which *see also* references are made. Where the scope of a heading is not obvious, especially where distinctions must be drawn between two or more headings, there is given in many instances, a statement defining the

scope and drawing the necessary distinctions. These statements have been made in response to exigencies and should be expected to be found in all cases where they are desirable.

Auxiliary Lists

While it was obviously not practicable to include, in the general list of subject headings, subdivisions which have been or could generally be used under each heading, the auxiliary list of *Subject Subdivisions*[1] makes it possible to tell which subdivisions have been used under all subject headings, under certain of them and under names of places. It includes the following lists: (a) subdivisions used under names of countries, states, etc., (b) subdivisions under names of cities and towns, (c) general form divisions used under all subjects, (d) additional subdivisions used under special classes of subjects, giving under each examples of headings under which it is used, and (e) a list of abbreviations for the most common subdivisions.

Subject Headings with Local Subdivisions[2], which includes a list (a) of headings with indirect local subdivision, (b) of headings with direct local subdivision, and (c) of local subdivisions (states, provinces, etc.) for which subdivision of heading is always direct. The fourth edition of the general list indicates for each heading subdivided by place whether subdivision is direct or indirect, which makes the first two parts of this auxiliary list less useful than before. However, the list of places for which subdivision is always direct is still a valid and useful aid.

An auxiliary list useful mainly because it segregates the headings in a single field of knowledge, is *Literature Subject Headings and Language Subject Headings*[3], a special feature

[1] Subject Subdivisions, 6th ed. Washington, Govt. print. off., 1924 (Reprinted 1926)
[2] Subject Headings with Local Subdivisions, 5th ed. Washington, Govt. print. off., 1925.
[3] Literature Subject Headings... and Language Subject Headings, 5th ed. Washington Govt. print. off., 1926.

of which is the list of subdivisions under Shakespeare, which serves as a basis for subdivisions under names of such authors as Dante, Homer, and Goethe.

The headings adopted after December 1940 are being issued (1941) in a *Quarterly Supplement*, which includes not only additions to headings found in the fourth edition of the general list, but also changes in headings and references.

Editorship of the List

While the headings in the fourth edition of the list are the product of many minds, the work of maintaining and integrating the many records needed in anticipation of the publication of the list and of editing was performed by Mary Wilson MacNair or done under her direction. It was begun in the Catalog Division of the Library of Congress and, after the reorganization of the cataloging process, continued in the Subject Cataloging Division. For several months prior to Miss MacNair's retirement, she was assisted by Miss Nella Jane Martin, who succeeded her as editor and who finished seeing it through the press.

DAVID JUDSON HAYKIN,
Chief, Subject Cataloging Division.

THE LIBRARY OF CONGRESS

SUBJECT CATALOGING DIVISION

SUBJECT HEADINGS

USED IN THE DICTIONARY CATALOGS OF

THE LIBRARY OF CONGRESS

Fifth Edition

Edited by NELLA JANE MARTIN

WASHINGTON, D. C.

1948

INTRODUCTION

THE FIFTH edition of the Library of Congress list of subject headings exhibits several important departures from preceding editions. It is, nonetheless, in direct line of succession to them and has the same characteristics and limitations. Like them it includes only the headings adopted for use in the dictionary catalogs of the Library of Congress in the course of cataloging the books added to the Library's permanent classified collections, and is not, therefore, a list of headings equally complete in all fields of knowledge. Neither is it a skeleton or basic list which could be completed in the course of years of cataloging. Such a list could have been contrived only if there had been, when the Library's dictionary catalogs were begun, a solid body of doctrine upon which it could have been based. But the guiding principles then in print were very meager, and concerned themselves principally with the choice and form of headings. They did not provide the theoretical basis for a system of headings. Whatever measure of logic and consistency has been achieved is due to the continuity of oral tradition which stems from J. M. C. Hanson, Chief of the Catalog Division from 1897 to 1910, Charles Martel, Chief from 1912 to 1936, and their associates, and to the occasional written instructions issued by them. The failures in logic and consistency are, of course, due to the fact that headings were adopted as needed, and that many minds participated in their choice and establishment. A growing awareness of the need of a statement of principles and rules of practice in subject cataloging has tended to correct deviations from logic and consistency, and has led to the gradual improvement of the headings in the Library's catalogs. Such minor inconsistencies in form as remain, particularly in regard to hyphenation, compound words, and spelling, are accounted for by the shift in recent years from Century, the authority formerly followed, to Webster as a more accurate reflection of current American usage.

EDITIONS OF THE LIST

The first edition of the list of subject headings was issued in parts between May 1909 and March 1914 and was supplemented by 14 additional lists extending to November 1917. The second edition was published in 1919, with three supplements following in 1921, 1922, and 1923, respectively. The third edition followed in 1928 with cumulative supplements in 1931, 1933, 1935, and 1938. The fourth edition, published in 1943, included the headings which appeared in the earlier editions, with the additions and changes recorded in the supplements to the third edition through December 1940. A new feature in this edition was the inclusion of a list of headings to which references have been made from other headings with indication of these so-called *refer from references*. This list appeared as a second volume. Eight quarterly supplements followed, and these were incorporated in a cumulative supplement covering the period from January 1941 through March 1943. Thereafter, cumulative supplements were issued monthly by the H. W. Wilson Company, with periodic cumulations of which the following constitute, in final form, the supplements to the fourth edition: 1941–1944, 1945, 1946, and January–June 1947. The fifth edition includes, except for such cancellations and changes as are noted in the supple-

ments, all the headings which appeared in the previous edition and its supplements. The outstanding feature of this edition is the integration in the main list of headings of the *refer from references* which in the fourth edition appeared as a separate volume. The adoption of a somewhat larger page, of 8-point type instead of 10-point as in earlier editions, the use of the symbols *ss*, *z*, and *zz* to indicate references, and the imposition of two columns to the page has made it possible to issue the entire work in one volume.

MUSIC HEADINGS

Since the publication of the fourth edition, Library of Congress subject headings in the field of music, especially music itself as distinguished from books about music, have undergone notable expansion. Inclusion in the fifth edition is not exhaustive; but an effort has been made to give the main headings, many of which are form rather than subject, and to include the references and subdivisions under a representative selection of these in sufficient fullness to guide the music cataloger. Subjects chosen for full treatment are: **Music, Orchestral music, Piano music, Operas.**

CLASSES OF HEADINGS OMITTED

Not all of the subject headings used in the dictionary catalogs of the Library are, however, included in the list. Of the following categories omitted from the list, only those headings have been retained which have appeared in earlier editions:

1. Names of persons, with the exception of **Lincoln, Napoleon, Shakespeare, Richard Wagner,** and **Washington.** These names are included in order to show by example the subdivisions which may be used under names of prominent individuals.
2. Names of corporate bodies, such as societies, institutions, firms, except where used in examples cited under some subject.
3. Names of places, except where they form an integral part of other headings or are used in examples cited under some subject, or when subdivisions under them must be shown, as in the case of historical periods. In the latter case period subdivisions are not given when they cover the reign of an individual ruler. The period subdivisions under Foreign relations and under Politics and government largely correspond to those under History, and are omitted except where used in examples cited under another subject.
4. Systematic names of the lower divisions in botany and zoology (families, genera and species) and references from scientific to popular names.
5. Names of individual chemical compounds.
6. Names of ships.
7. Names of religious bodies, except those of major importance or interest.
8. Names of special prayers, *e. g.*, Anima Christi, Ave Maria.
9. Names of most individual deities.

CHARACTERISTICS OF THE LIST

Substantial changes have been made in the physical characteristics of this edition. All main headings are printed in boldface type, and not merely those which have local subdivision, as in earlier editions. Local subdivision is indicated by the words *Direct* or *Indirect* in parentheses, following the heading, thus: **Public utilities** (*Direct*), and **School attendance** (*Indirect*), which, as applied, yield, *e. g.*, **Public utilities—Los Angeles; School attendance—California—Los Angeles,** respectively.

The basis for the distinction between headings which require indirect subdivision by place and those for which direct subdivision is indicated

is that for some subjects the dominant interest is regarded as pertaining to the whole country or state, while for others the interest lies in the specific locality. Indirect subdivision is indicated for the broad headings in the sciences, both pure and applied, in education, ethnology, and the like, *e. g.*, **Agriculture—England**; **Agriculture—England—Devon**; **Education—Germany**; **Education—Germany—Berlin**. Exception is made in the case of names of historic kingdoms and principalities, members of federated states, mediatized states, and, in general, areas which in the course of their history have formed a part of more than one state, as well as in the case of ecclesiastical provinces (archdioceses, dioceses, etc.), and physiographic regions, which do not fall wholly within, or are not identified with, one political jurisdiction, such as bodies of water, mountain ranges, and islands. New York (City) and Washington, D. C. are specifically excepted. All these are used as direct subdivisions under subject.[1]

Headings for certain classes of institutions, such as Universities and colleges, Libraries, Hospitals, whose activities are largely or exclusively identified with cities, are used as subdivisions under names of cities. This does not preclude their use as main headings subdivided by name of country, state, province, and the like, *e. g.*, **Libraries—Massachusetts**, but **Boston—Libraries**, not **Libraries—Massachusetts—Boston**, or **Libraries—Boston**. This use is noted in the list under the respective headings.

The full lists of subdivisions for **Lincoln, Napoleon, Shakespeare, Wagner,** and **Washington** serve as guides for subdivisions under other prominent persons, particularly statesmen, men of letters, and musicians.

Enclosed in parentheses, immediately following many of the headings, are symbols made up of letters and Arabic numerals which are sometimes preceded by a qualifying word or phrase. These symbols are class numbers showing where material on the subject is classified in the Library of Congress. They are not in every case equivalent to the subject, but are merely suggestive and are to be used only where the subject matter of the book justifies it. The words and phrases preceding the class number within the parentheses are merely explanatory; they do not represent a form of subject heading.

Subdivisions, formerly printed in italics, are printed in light face roman, the use of italics in this edition being restricted to matter which does not form an integral part of the heading. Although the more important subdivisions are included, the general form divisions, such as Directories, Periodicals, Societies, etc., which may be used under any subject as required, have as a rule been omitted. Language subdivisions have been given in full under English language only. The same subdivisions are used when needed under other languages. Subdivisions used under countries are given in full under United States only. Under other countries only subdivisions showing historical periods, and those used in examples cited under other subjects, or occurring in references, are given.

Interspersed among the subject headings are references from forms of headings not used in the Library's catalogs to those adopted.

Many headings are followed by lists of related headings to which *See also* references are made, and by synonymous or related headings from which reference is made to the heading under which they are listed. Where the scope of the heading is not obvious, especially where distinctions must be drawn between two or more headings, a statement defining the scope and drawing the necessary distinctions is provided.

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[1] A list of local divisions which are always used as direct subdivisions of headings follows this Introduction.

An attempt has been made to bring the capitalization of headings into line with the rules of capitalization in descriptive cataloging adopted by the Library of Congress in 1948. Where these rules do not apply, Webster's Dictionary has been followed, as representing current American usage.

AUXILIARY LISTS

While it was obviously not practicable to include, in the general list of subject headings, subdivisions which have been, or could generally be, used under each heading, the auxiliary list of *Subject Subdivisions*[3] makes it possible to tell which subdivisions have been used under all subject headings, which under certain of them, and which under names of places. It includes the following lists: (*a*) subdivisions used under names of countries, states, etc., (*b*) subdivisions under names of cities and towns, (*c*) general form divisions used under all subjects, (*d*) additional subdivisions used with special classes of subjects, giving for each examples of headings under which it is used, and (*e*) a list of subdivisions with their abbreviations as used on Library of Congress printed cards.

Subject Headings with Local Subdivisions,[3] which includes a list (*a*) of headings with indirect local subdivision, (*b*) of headings with direct local subdivision, and (*c*) of local subdivisions (States, provinces, etc.) for which subdivision of heading is always direct. The fifth edition of the general list indicates for each heading subdivided by place whether subdivision is direct or indirect, and includes a list of places to which subdivision is always direct, which makes this auxiliary list less useful than before.

An auxiliary list which segregates the headings in a single field of knowledge is *Literature Subject Headings and Language Subject Headings*.[4]

Since June 1947, a monthly cumulative supplement has been issued containing additions to and changes in headings and references in the fifth edition.

EDITORIAL WORK

While the headings of the fifth edition are the product of many minds, the work of maintaining and integrating the many records in anticipation of the publication of the list was performed by the Editor of Subject Headings, Nella Jane Martin, and the Assistant Editor, Marguerite V. Quattlebaum. The actual editing is to be credited to Miss Martin. Eleanor ff. Duncan and Frederick A. Blossom helped in the preparation of copy and the reading of proof. Mrs. Quattlebaum, upon whom devolved the work of editing the cumulative supplements while the fifth edition was in progress, assisted in reviewing copy before it went to the printer. Mention should also be made of the contribution of Leo E. LaMontagne who was responsible for much of the planning of the work. To these, and to others too numerous to be named here, credit is due for the quality and completeness of the list.

DAVID JUDSON HAYKIN,
Chief, Subject Cataloging Division.

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[3] Subject Subdivisions, 6th ed. Washington, Govt. print. off., 1924 (Reprinted 1933).

[3] Subject Headings with Local Subdivisions. 5th ed. Washington, Govt. print. off., 1926.

[4] Literature Subject Headings . . . and Language Subject Headings. 5th ed. Washington, Govt. print. off., 1926.

LIST OF LOCAL DIVISIONS WHICH ARE ALWAYS USED AS DIRECT SUBDIVISIONS OF SUBJECTS

The following local divisions are exceptions to the general rule in regard to indirect subdivision; they are always used directly after the subject heading (*e. g.*, Agriculture—Alsace; Botany—Ohio; Education—Prussia; Fruit-culture—Ontario).

The States and territories of the United States; also District of Columbia, New York (City), and Washington, D. C.

The Provinces of Canada.

The States of Australia:

New South Wales; Queensland; South Australia; Tasmania; Victoria; Western Australia.

The States of Germany:

Anhalt; Baden; Bavaria; Bremen; Brunswick; Hamburg; Hesse; Lippe; Lübeck; Mecklenburg; Oldenburg; Prussia; Saxony; Schaumburg-Lippe; Thuringia; Württemberg.

The Provinces of Prussia:

Brandenburg; Grenzmark Posen-Westpreussen; Hanover; Hesse-Nassau; Hohenzollern; Pomerania; Prussia, East; Rhine Province; Saxony; Schleswig-Holstein; Silesia, Lower; Silesia, Upper; Westphalia.

The Provinces of Bavaria:

Bavaria, Lower; Bavaria, Upper; Franconia, Lower; Franconia, Middle; Franconia, Upper; Palatinate; Palatinate, Upper; Swabia.

The Provinces, etc., of Austria:

Austria, Lower; Austria, Upper; Burgenland; Carinthia; Salzburg; Styria; Tyrol; Vorarlberg.

The Provinces of the Netherlands:

Brabant, North; Drenthe; Friesland; Gelderland; Groningen; Holland, North; Holland, South; Limburg; Overijssel; Utrecht; Zealand.

Divisions of France:

Alsace; Angoumois; Anjou; Artois; Aunis; Auvergne; Béarn; Berry; Bourbonnais; Brittany; Burgundy; Champagne; Dauphiné; Flanders; Foix; Franche-Comté; Gascony; Guyenne; Île de France; Languedoc; Limousin; Lorraine; Lyonnais; Maine; Marche; Navarre; Nivernais; Normandy; Orléanais; Perche; Picardy; Poitou; Provence; Roussillon; Saintonge; Savoy; Touraine; also Corsica.

Divisions of Italy:

Abruzzi and Molise; Apulia; Calabria; Campania, Emilia; Latium; Liguria; Lombardy; Lucania; Marches; Piedmont; Sardinia; Sicily; Tuscany; Umbria; Veneto; Venezia Giulia; Venezia Tridentina.

Besides the local divisions given above, subdivision of subject headings is direct to areas which in the course of their history have formed a part of more than one state; also to ecclesiastical provinces (archdioceses, dioceses, etc.) which do not fall wholly within, or are not identified with, one political jurisdiction.

ABBREVIATIONS

In indicating subject headings on Library of Congress cards, the following subdivisions are abbreviated:

Antiquities	Antiq.
Bibliography	Bibl.
Bio-bibliography	Bio-bibl.
Biography	Biog.
Boundaries	Bound.
Commerce	Comm.
Description	Descr.
Description and travel	Descr. & trav.
Dictionaries and encyclopedias	Dict. & encyc.
Directories	Direct.
Discovery and exploration	Disc. & explor.
Economic conditions	Econ. condit.
Emigration and immigration	Emig. & immig.
Foreign relations	For. rel.
Genealogy	Geneal.
History	Hist.
History and criticism	Hist. & crit.
Industries	Indus.
Manufactures	Manuf.
Periodicals	Period.
Politics and government	Pol. & govt.
Sanitary affairs	Sanit. affairs
Social conditions	Soc. condit.
Social life and customs	Soc. life & cust.
Statistics	Stat.

The abbreviations Gt. Brit. and U. S. are used both as main headings and in subdivisions except that neither is abbreviated when it stands alone without subdivision and Great Britain is not abbreviated in phrase headings, *e. g.*, Jews in Great Britain.

xa — *see also*
x — Refer from (*see*)
xx — Refer from (*see also*)

Subject Headings

USED IN THE DICTIONARY CATALOGS OF

THE LIBRARY OF CONGRESS

Sixth Edition

EDITED BY MARGUERITE V. QUATTLEBAUM

Library of Congress

Processing Department • Subject Cataloging Division

WASHINGTON, D. C.

1957

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Introduction

THE SIXTH EDITION of the Library of Congress list of subject headings contains, with the exceptions noted below, the headings established and applied by the Library from 1897 through December 1955. It follows the format of the Fifth Edition with two exceptions: 1) the imposition of three columns to the page instead of two has made it possible, despite the large increase in content, to keep the volume within manageable limits; 2) the references, like those in the supplements since 1954, are in general printed in single lines rather than in paragraphs.

Additions to and changes in these headings since 1955 will be found in the yearly supplement for 1956 and in monthly and cumulative supplements beginning with January 1957.

Music Headings

During the past fifteen years the Library has expanded its subject headings in the field of music, especially for music scores. Some of the music form headings appeared in the Fifth Edition and a separate list of all music headings was published in 1952 under the title *Music Subject Headings*. The present edition includes all music headings developed and applied through December 1955.

Classes of Headings Omitted

In common with earlier editions, this one omits for reasons of space many headings which the Library of Congress uses on its printed catalog cards and in its catalogs. The following classes of headings are excluded:

1. Names of persons, with the exception of **Lincoln, Napoleon, Shakespeare, Richard Wagner,** and **Washington.** These names are included in order to show by example the subdivisions which may be used under names of prominent individuals, particularly statesmen, men of letters, and musicians.

2. Names of corporate bodies, such as societies, institutions, and firms, except when used in examples cited under some subject.

3. Names of places, except when they form an integral part of other headings or are used in examples cited under some subject, or when subdivisions under them must be shown, as in the case of historical periods. In the latter case, period subdivisions are not given when they cover the reign of an individual ruler. The period subdivisions under Foreign relations and Politics and government, which largely correspond to those under History, are omitted except when used in examples cited under another subject.

4. Systematic names of the lower divisions in botany and zoology (families, genera, and species) and references from scientific to popular names.

5. Names of individual chemical compounds.

6. Names of ships.

7. Names of most religious bodies.

8. Names of special prayers, *e. g.* Anima Christi, Ave Maria.

9. Names of most individual deities.

Characteristics of the List

The present edition, like its predecessors, is a record of the headings traced on the Library's printed catalog cards and used in its card catalogs and cumulative *Catalog* series. The list is the product of evolutionary forces, among them the growth of the Library's collections, semantic change, and varying theories of subject heading practice over the years. As a consequence the list is, at any point in time, an accurate reflection of practice but not a complete embodiment of theory. For more than a decade, however, the choice and form of headings and references in the list have been guided by the principles and practices set forth in David Judson Haykin's *Subject Headings, a Practical Guide*, published in 1951 by the Library of Congress.

The two ways in which this edition differs in format from its immediate predecessor have already been noted.

All main headings are in boldface type, *e. g.* **Machine translating; Nuclear shell theory; Sales forecasting.**

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The words (*Indirect*) and (*Direct*) indicate those headings which are subdivided by place, indirectly (with interposition of the name of a country or state between the subject and the name of a place within a country or state), or directly (without such interposition), *e. g.*

Uranium ores (*Indirect*): **Uranium ores—Utah—Daggett Co.**

Taxation (*Direct*): **Taxation—Daggett Co., Utah.**

Subdivision is always direct under the names of historic kingdoms and principalities, members of federated states, mediatized states, and, in general, areas which in the course of their history have formed a part of more than one state, as well as in the case of ecclesiastical jurisdictions (provinces, archdioceses, dioceses, etc.) and physiographic regions which do not fall wholly within, or are not identified with, one political jurisdiction, such as bodies of water, mountain ranges, and islands. New York (City) and Washington, D. C. are always used as direct subdivisions under subject. A list of areas and localities which are always used as direct subdivisions of headings follows this introduction.

Certain headings are used both as main headings with local subdivision and as subdivisions under the names of cities, *e. g.*

Libraries (*Indirect*): **Libraries—Massachusetts—Worcester Co.**; but **Boston—Libraries.**

Water-supply (*Indirect*): **Water-supply—Michigan—Paw Paw River Valley**; but **Detroit—Water-supply.**

This use is noted in the list under the respective headings.

Subdivisions are printed in light face roman, the use of italics being restricted to matter which does not form an integral part of the heading. Although the more important subdivisions are included, the general form divisions, such as Directories, Periodicals, Societies, etc., which may be used under any subject as required, have as a rule been omitted. Subdivisions used under names of languages have been given in full under English language only. The same subdivisions are used when needed under other languages. Subdivisions used under countries are given in full only under the United States. Under other countries only subdivisions showing historical periods, and those used in examples cited under other subjects, or occurring in references, are given.

Symbols indicate the references to be made in the catalog: *sa*—*see also*; *x*—Refer from (*see*); *xx*—Refer from (*see also*), *e. g.*

Nuclear geophysics.
sa Radiocarbon dating.
x Nuclear geology.
xx Geophysics.

The actual *see* references from terms not used to those used appear in the following form in alphabetical order: Nuclear geology. *See* Nuclear geophysics.

Scope notes are provided when it is desirable to specify the range of subject matter to which a heading is applied in the Library's catalogs or to draw necessary distinctions between related headings. These notes appear in the list immediately following the headings with which they are used. A typical example may be found under the heading Civil service.

Library of Congress class numbers in parentheses follow many of the headings, *e. g.*

Atomic mass. (*Chemistry, QD466; Physics, QC173*)
Dilemma. (*BC185*)
Dingal language. (*PK2461–9*)

These class numbers are added only when there is a close correspondence between a specific subject heading and the Library of Congress Classification. Although such subject headings serve in part as a general index to the classification schedules, the suggested numbers should not be used without referring to the individual indexes.

Auxiliary Lists of Subdivisions

At the end of this introduction will be found two lists relating to the Library's use of subdivisions: Areas and Localities Used as Direct Subdivisions and General Form Subdivisions. A list of chronological subdivisions used under headings for areas and jurisdictions has been published as *Period Subdivisions under Names of Places* (1950).[1] Most of these subdivisions are not included in this volume or its predecessors. Of earlier lists, *Subject Subdivisions* (6th ed., 1924; reprinted 1936)[1] and *Subject Headings with Local Subdivision* (5th ed., 1935)[1] are largely superseded and will not be reprinted. *Subject Subdivisions* attempted to bring together all subjects or types of subjects under which particular subdivisions have been

[1] Washington, Government Printing Office.

used, but its usefulness was impaired because it could not be revised frequently to show deletions of old subdivisions, additions of new subdivisions, and new topics added under existing subdivisions. The material in all three parts of this publication, with a few exceptions, is printed under specific headings or references in the Sixth Edition. The material in *Subject Headings with Local Subdivision* has been integrated into the list of subject headings by the insertion of (*Direct*) or (*Indirect*) following specific headings, and by the inclusion of part (C), with a change in caption, following this introduction. Material in both lists is maintained on a current basis by the inclusion of additions and changes in the cumulative supplements of subject headings.

Lists of Headings in Special Fields

The Library has published two lists which consist of headings in particular fields of knowledge: *Literature Subj t Headings and Language Subject Headings* (5th ⊥, 1926)[1] and *Music Subject Headings* (1952).[1]

Development and Editorial Work

Since the establishment of the Subject Cataloging Division in 1941, the development and revision of headings has been the responsibility of members of the Subject Cataloging Section. The work of maintaining and integrating the many records involved in anticipation of the publication of this edition and its supplements was performed by the Editor of Subject Headings, Marguerite V. Quattlebaum, and the Assistant Editor, Marie M. Glass. Mrs. Quattlebaum is to be credited with the actual editing. Joseph S. Allen, Helen E. Bush, and Kathleen E. Clifford assisted in the preparation of copy and in proofreading.

Many officers of the Library and of the Government Printing Office have collaborated in planning the design and production of the Sixth Edition. The general direction of the work has been the responsibility of the principal administrative officers of the Subject Cataloging Division. David J. Haykin, Specialist in Subject Cataloging and Classification, was Chief of the Division until October 1952. Leo E. La Montagne, Assistant Chief and Principal Cataloger, served as Acting Chief from September 1956 to June 1957, the final period of preparation.

RICHARD S. ANGELL,
Chief of the Subject Cataloging Division.

JOHN W. CRONIN,
Director of the Processing Department.

[1] Washington, Government Printing Office.

Areas and Localities Used as Direct Subdivisions

THE FOLLOWING areas and localities are the principal exceptions to the general practice in regard to indirect subdivision; they are always used directly after the subject heading, *e. g.* **Education**—Bavaria; **Fisheries**—Nova Scotia; **Forest reserves**—Maine.

The States and Territories of the United States; also District of Columbia, New York (City), and Washington, D. C.

The Provinces of Canada.

The States of Australia:
New South Wales; Queensland; South Australia; Tasmania; Victoria; Western Australia.

The States of Germany:
Anhalt; Baden; Bavaria; Bremen; Brunswick; Hamburg; Hesse; Lippe; Lübeck; Mecklenburg; Oldenburg; Prussia; Saxony; Schaumburg-Lippe; Thuringia; Württemberg.

The Provinces of Prussia:
Brandenburg; Grenzmark Posen-Westpreussen; Hanover; Hesse-Nassau; Hohenzollern; Pomerania; Prussia, East; Rhine Province; Saxony; Schleswig-Holstein; Silesia, Lower; Silesia, Upper; Westphalia.

The Administrative Districts (Regierungsbezirke) of Bavaria:
Bavaria, Lower; Bavaria, Upper; Franconia, Lower; Franconia, Middle; Franconia, Upper; Palatinate; Palatinate, Upper; Swabia.

The Provinces, etc. of Austria:
Austria, Lower; Austria, Upper; Burgenland; Carinthia; Salzburg; Styria; Tyrol; Vorarlberg.

The Provinces of the Netherlands:
Brabant, North; Drenthe; Friesland; Gelderland; Groningen; Holland, North; Holland, South; Limburg; Overijssel; Utrecht; Zealand.

Divisions of France:
Alsace; Angoumois; Anjou; Aquitaine; Artois; Aunis; Auvergne; Béarn; Berry; Bourbonnais; Brittany; Burgundy; Champagne; Dauphiné; Flanders; Foix; Franche-Comté; Gascony; Guyenne; Ile de France; Languedoc; Limousin; Lorraine; Lyonnais; Maine; Marche; Navarre; Nivernais; Normandy; Orléanais; Perche; Picardy; Poitou; Provence; Roussillon; Saintonge; Savoy; Touraine; Valois; also Corsica.

Divisions of Italy:
Abruzzi and Molise; Apulia; Calabria; Campania; Emilia; Latium; Liguria; Lombardy; Lucania; Marches; Piedmont; Sardinia; Sicily; Tuscany; Umbria; Veneto; Venezia Giulia; Venezia Tridentina.

The Autonomous and Constituent Republics of the U. S. S. R., *e. g.* Bashkiria, Ukraine, etc.

Subdivision of subject headings is also direct to areas which in the course of their history have formed a part of more than one state; also to ecclesiastical jurisdictions (provinces, archdioceses, dioceses, etc.) which do not fall wholly within, or are not identified with, one political jurisdiction; and to many bodies of water, mountain ranges, islands, etc.

General Form Subdivisions

THE FOLLOWING subdivisions, with variations under some headings, are used in the Library of Congress catalogs under any subject heading as required.

Addresses, essays, lectures.
For addresses, essays, or lectures, whether issued singly and dealing with the subject as a whole in general terms, or in collections by one or more authors dealing with various aspects or branches of a subject. The subdivision is not used for works to which the term "essay" is applied but which are in fact comprehensive treatises on a subject or a branch of a subject.

Bibliography.
Bio-bibliography.
Collected works.
Ordinarily for works of one author. In certain cases, especially under scientific and technical subjects, the subdivision Collected works covers works by one or more authors, *e. g.* Science—Collected works.
Collections.
Ordinarily to cover collections of works by different authors. In certain cases, however, especially under scientific and technical headings, the subdivision Collected works is used for works of either one or more authors in order to avoid conflict with headings for works on collections of objects, such as Arms and armor—Collections; Autographs—Collections.
Congresses.
Dictionaries.
Directories.
Exhibitions.
Handbooks, manuals, etc.
History.
Indexes.
Outlines, syllabi, etc.
Confined to syllabi and outlines in the strict sense of these terms. Does not include treatises to which the terms "compends," "manuals," or "handbooks" are applied.
Periodicals.
Societies, etc.
Statistics.
Study and teaching.
Yearbooks.

Abbreviations

THE FOLLOWING subdivisions are abbreviated on Library of Congress cards:

Antiquities	Antiq.
Bibliography	Bibl.
Bio-bibliography	Bio-bibl.
Biography	Biog.
Boundaries	Bound.
Commerce	Comm.
Description	Descr.
Description and travel	Descr. & trav.
Dictionaries and encyclopedias	Dict. & encyc.
Directories	Direct.
Discovery and exploration	Disc. & explor.
Economic conditions	Econ. condit.
Emigration and immigration	Emig. & immig.
Foreign relations	For. rel.
Genealogy	Geneal.
History	Hist.
History and criticism	Hist. & crit.
Industries	Indus.
Manufactures	Manuf.
Periodicals	Period.
Politics and government	Pol. & govt.
Sanitary affairs	Sanit. affairs
Social conditions	Soc. condit.
Social life and customs	Soc. life & cust.
Statistics	Stat.

The abbreviations Gt. Brit. and U. S. are used both as main headings and in subdivisions. Neither, however, is abbreviated when it stands alone without subdivision and Great Britain is not abbreviated in phrase headings, *e. g.* Jews in Great Britain.

Previous Editions of the Subject Heading List

Subject Headings Used in the Dictionary Catalogs of the Library of Congress.

Washington, Government Printing Office.

1st edition	1910–1914	2 vol.	1068 p.
2d edition	1919	9 pts.	1315 p.
3d edition	1928	1 vol.	1535 p.
4th edition	1943	2 vol.	2743 p.
5th edition	1948	1 vol.	1204 p.

SUBJECT HEADINGS

Used in the Dictionary Catalogs of the Library of Congress

Seventh Edition

Edited by

Marguerite V. Quattlebaum

Subject Cataloging Division • Processing Department

LIBRARY OF CONGRESS

WASHINGTON : 1966

Introduction

THE SEVENTH EDITION of the Library of Congress list of subject headings contains, with the exceptions noted below, the headings established and applied by the Library from 1897 through June 1964. Subsequent additions to and changes in these headings will be found in the supplement for July 1964–December 1965 and in monthly and cumulative supplements beginning with January 1966.

Method of Production

Recent developments in printing technology have made it possible to produce the present volume by using automated techniques. Copy for this edition was converted to machine-readable form at the Government Printing Office. Format codes for each item were assigned by the keyboard operator, and the locator numbers for each line were generated automatically by a computer. The tape resulting from these operations was then fed through a photocomposing machine to produce the text as it appears here. This volume was printed on the Government Printing Office's high-speed offset presses.

Since January 1966 the supplements have been printed by the automated techniques described in the preceding paragraph. A computer program merges each month's additions and revisions with the tape for the preceding issue to produce the monthly cumulated supplement. When the supplement for July 1964–December 1965 has been converted to machine-readable form the basis will have been laid for automatic production of a single cumulated supplement to the seventh edition of the list and in due course for production of the eighth edition by the same means. Elimination of repetitive composition and proofreading operations afforded by these techniques is expected to result in more rapid production of future major cumulations and new editions of the list.

Format. This edition follows the format of the sixth edition with four exceptions: 1) the increase in the number of lines per page and the omission of continued heads, except from odd to even pages, have made it possible, despite the large increase in content, to keep the edition in one volume; 2) the *see* references, like those in the supplements since 1964, are in general printed in single lines rather than in paragraphs; 3) periods have been omitted after main headings, subdivisions, and cross references but have been retained within headings, class numbers, and scope notes and in abbreviations; 4) the shorter standard dash of the photocomposing machine grid is used.

Categories of Headings Omitted

The present edition, like its predecessors, omits many headings used on Library of Congress printed cards. Following is a list of the principal categories of such headings:

1. Persons, except that Lincoln, Napoleon, Shakespeare, Richard Wagner, and Washington are included in order to show by example the subdivisions which may be used under names of prominent individuals, particularly statesmen, men of letters, and musicians.
2. Family names.
3. Corporate bodies, including governments and their agencies, societies, institutions, and firms.
4. Places and regions, except when they form an integral part of other headings, when subdivisions under them must be shown, as in the case of historical periods, or when the scope of such a heading is indicated in a scope note.
5. Natural features such as bays, capes, deserts, lakes, mountains, rivers, volcanoes.
6. Structures such as aqueducts, bridges, canals, dams, reservoirs; buildings, castles, historic houses, lighthouses; power plants.

7. Metropolitan areas; parkways, roads, squares, streets; cemeteries.
8. Ships.
9. Parks, forests and forest reserves, wildlife refuges.
10. Systematic names of families, genera, and species in botany and zoology; references from scientific to popular names.
11. Chemical compounds.
12. Most religious bodies.
13. Most sacred books, anonymous religious classics, and special prayers.
14. Gods and goddesses; mythological characters.

It should be noted that headings from any of these categories of names may appear in the list if they are used as examples cited under a subject.

Headings, References, Entries

The choice and form of the headings and references in the list have been guided for many years by the principles and practices set forth by David Judson Haykin, Chief of the Subject Cataloging Division from 1940 to 1952, in his *Subject Headings: a Practical Guide* (Washington, Government Printing Office, 1951).

A typical entry consists of the main heading in boldface type, *e.g.* **Alphabet, Life on other planets, Nuclear physics,** followed, in lightface roman, by reference tracings, subdivisions, and other indications affecting its use in the system. Below the heading is listed the record of the cross references associated with the heading; *sa* (*see also*) is the abbreviation preceding the references to be made to headings for related and subordinate topics; *x* (*see* from) designates references that are to be made to the heading from expressions not used as headings, that are in general synonymous with, or alternative forms of, the heading; *xx* (*see also* from) is a record of the headings from which *sa* references are to be made to the heading. Each of the tracings in the reference block appears also in the list in its alphabetical position, the *sa*'s and *xx*'s as headings, the *x*'s in the following form: Labor-unions *See* Trade-unions; Physics, Nuclear *See* Nuclear physics.

Class numbers. Many of the headings are followed by Library of Congress class numbers which generally represent the most common aspect of a subject. If several aspects of a subject are covered by different class numbers, the latter are qualified by a term indicating the specific discipline to show the distinction, *e.g.*

Diesel motor (*TJ795*)
Norwegian language (*PD2571–2699*)
Shellfish (*Cookery, TX753; Public health, RA602.S2; Shellfish as food, TX387; Zoology, QL401–445*)

Class numbers are added only when there is a close correspondence between the subject heading and the provisions of the Library of Congress classification schedules. Since these, as well as the subject heading list, are subject to continuous revision, the class numbers in the list should not be used without verification in the latest editions of the schedules and their supplements.

Scope notes. Scope notes are provided when needed to ensure consistency of subject usage by specifying the range of subject matter to which a heading is applied in the Library's catalogs, by drawing necessary distinctions between related headings, or by stating which of several meanings of a term is the one to which its use in the Library's catalogs is limited. These notes appear in the list immediately following the headings with which they are used. A typical example may be found under the heading **Civil service.**

Subdivisions of Headings

Main headings may be divided by several kinds of subdivisions. Those found appropriate to a main heading are listed under that heading, following the cross references. Subdivisions of general application—often called form subdivisions—are listed at the end of this introduction. They may be used under any heading.

Period subdivisions. Period subdivisions for countries are given under the subdivision *History*, except when they are coextensive with the reign of an individual ruler. They are omitted from the list under the subdivisions *Foreign relations* and *Politics and government*, since they largely correspond to those for *History*. Period subdivisions under other subdivisions, *e.g. Description and travel* and *Economic conditions*, have not been incorporated in the list for considerations of space.

Period subdivisions are also used to mark significant dates in the evolution of the literature of a subject, *e.g.* **Philosophy, French**—18th cent., or arbitrarily to divide a large file by date of publication, *e.g.* **Aeronautics**—Early works to 1900.

Local subdivision. Many subject headings may be subdivided by the name of a country or other political entity, region, or geographic feature. Headings for subjects that lend themselves to treatment by such limitations are followed by one of two designations, *(Direct)* or *(Indirect)*. The former indicates that the local subdivision follows directly after the subject heading, *e.g.*

Banks and banking—U.S.
Banks and banking—Ohio
Banks and banking—Cleveland

The designation *(Indirect)* indicates in general that the name of the relevant country is to be interposed between the subject heading and the name of any subordinate political, administrative or geographical division within a country, *e.g.*

Agriculture—Chile—Patuende Valley
Music—Switzerland—Zürich

To this normal pattern for indirect subdivision there are, however, several exceptions: the names of certain cities, states, provinces, divisions, etc., and of certain categories of political and geographic entities are always used directly after the subject heading. A list of these names and categories is given at the end of this introduction. Some of the most commonly encountered examples of these exceptions follow:

1. United States, Canada, Great Britain. The names of the states, provinces, territories, and constituent countries are always used directly after the subject heading, and the names of counties, cities, and other subordinate units, if required, as further subdivision, *e.g.*

Music—Illinois—Chicago
Education—Ontario—Huron Co.
Sports—England—London

2. Certain other countries and states. The states, provinces, and major divisions of the following are named directly after the subject heading:

Australia
Austria
Bavaria (Regierungsbezirke)
France (Old provinces)
Germany
Germany (Federal Republic, 1949–)
Italy (Regions)
Netherlands
Prussia
USSR

If, however, a subordinate locality such as a county or city in any of these countries is to be named, the name of the country is interposed between the subject heading and the place name, as in the normal pattern for indirect subdivision, *e.g.*

Agriculture—Ukraine
Agriculture—Russia—Kiev (Province)
Education—Siberia
Education—Russia—Irkutsk (City)
Music—Bavaria
Music—Germany—Munich

Names of regions and of geographical features, if they are wholly contained within a country, state, or province, are treated in the same manner, *e.g.*

Geology—California—San Bernardino Mountains
but
Geology—Rocky Mountains
Geology—Russia—Volga Valley
but
Geology—Alps
Geology—Australia—Gippsland
(not **Geology**—Victoria, Australia—Gippsland)

"Indirect" headings for which subdivision by city is not used. Many headings subdivided indirectly are also used as subject subdivisions under names of cities. In these instances subdivision of the heading by city is not used, but instead the name of the city is subdivided by subject, *e.g.*

Libraries—Illinois—LaSalle Co.
but
Chicago—Libraries
(not **Libraries**—Illinois—Chicago)
Fire prevention—California
but
Los Angeles—Fires and fire prevention
(not **Fire prevention**—California—Los Angeles)

If a subject heading is to be used in this manner, the fact is indicated in each case by a reference in the following form: "*also subdivision . . . under names of cities, e.g. . . .*"

Order of precedence of local subdivision. If both local subdivision and subject or form subdivision are to be applied in cataloging a work, the order of subdivisions is as follows: 1) when the words (*Direct*) or (*Indirect*) follow the main heading but not the subdivision, the geographic name

is interposed between the main heading and the subdivision, *e.g.*

Construction industry *(Direct)*
–Finance
Construction industry–Poland–Finance

2) when the words (*Direct*) or (*Indirect*) following the subject subdivision indicate that it can be divided by place, the local subdivision is placed at the end, *e.g.*

Construction industry (*Direct*)
–Law and legislation (*Direct*)
Construction industry–Law and legislation–Poland

(When a main heading is first divided by place and then by subject, a *see also* reference is made in the Library of Congress catalogs, *e.g.*

Construction industry–Finance
See also
Construction industry–[local subdivision]–Finance)

Examples of subdivision patterns. In order to show by example the complete set of subdivisions appropriate to headings in certain categories, all of the subdivisions for selected headings have been included in the list in order to indicate the subdivisions which may be used, as required, under other headings in the respective category:

Categories	*Headings*
Armies and navies	U.S. Army U.S. Navy
Christian denominations	Catholic Church Church of England Lutheran Church
Colleges and universities	Harvard University
Countries	United States
Founders of religions	Jesus Christ
Languages; Literatures	English
Monastic and religious orders	Jesuits
Persons	Lincoln Napoleon Shakespeare Richard Wagner Washington
Sacred books	Bible
Wars	European War, 1914–1918 U.S. – Hist. – Revolution World War, 1939–1945

Acknowledgments

Since 1941, following the establishment of the Subject Cataloging Division, the development and revision of headings have been the responsibility of the members of the Subject Catalogers Section. The work of maintaining and integrating the many records involved in anticipation of the publication of this edition and its supplements was performed by or under the supervision of Marguerite V. Quattlebaum, Editor of Subject Headings until August 1964 and since that date Head of the Editorial Section. Mrs. Quattlebaum edited and prepared the final copy, and Joseph S. Allen, Editor of Subject Headings since August 1964, and Marie M. Glass, Assistant Editor, assisted in the proofreading.

Of the many members of the staff of the Government Printing Office who collaborated with the Library in planning the design and production of the seventh edition, the following deserve special recognition: John Boyle, Special Assistant to the Production Manager for Electronic Printing; Edward F. Mullin, Digital Computer Systems Analyst; and Elmo Wood, Assistant Foreman of the Electronic Printing Production Unit.

The general direction of the work which has resulted in publication of this edition has been the responsibility of the Chief and the other principal administrative officers of the Library's Subject Cataloging Division, Robert R. Holmes, Assistant Chief, and Charles C. Bead, Principal Cataloger.

Richard S. Angell
Chief of the Subject Cataloging Division

John W. Cronin
Director of the Processing Department

Names of Political and Geographic Entities Used Directly After Subject Headings

THE FOLLOWING names and categories of names are used directly after subject headings, when local subdivision is appropriate, even though the heading may be designated for indirect subdivision. Use of the names is illustrated in the section above on **Subdivisions of Headings.**

The States of the United States; also District of Columbia, New York (City), and Washington, D.C.

The Provinces of Canada

The constituent countries of Great Britain

The states, provinces, and major divisions of the following:

- Australia
- Austria
- Bavaria (Regierungsbezirke)
- France (Old provinces)
- Germany
- Germany (Federal Republic, 1949–)
- Italy (Regions)
- Netherlands
- Prussia
- USSR

Historic kingdoms and principalities, *e.g.* Naples (Kingdom); Sardinia (Kingdom)

Mediatized states, *e.g.* Fürstenberg (Principality); Wertheim (Grafschaft)

Areas which in the course of their history have been under the jurisdiction of more than one sovereignty or which have had a separate political existence, *e.g.* Banat; Danzig

Ecclesiastical jurisdictions (provinces, archdioceses, dioceses, etc.) which do not fall wholly within one political jurisdiction

Physiographic regions which do not fall wholly within, or are not identified with, one political jurisdiction, such as certain bodies of water, mountain ranges, and islands

Certain large geographic areas within countries, *e.g.* Brazil, Northeast; Italy, Southern; Siberia

Subdivisions of General Application

THE FOLLOWING subdivisions, with variations under some headings, are used in the Library of Congress catalogs under any subject heading as required.

Abstracts

Addresses, essays, lectures

For addresses, essays, or lectures, whether issued singly and dealing with the subject as a whole in general terms, or in collections by one or more authors dealing with various aspects or branches of a subject.

Bibliography

Bio-bibliography

Case studies

Collected works

Ordinarily for works of one author. In certain cases, especially under scientific and technical headings, the subdivision *Collected works* is used for works by one or more authors, *e.g.* Science—Collected works.

Collections

Ordinarily for publications containing works by different authors. In certain cases, however, especially under scientific and technical headings, the subdivision *Collected works* is used for collections of works by either one or several authors in order to avoid suggesting a work on collections of objects.

Congresses

Dictionaries

Directories

Exhibitions

Film catalogs

Handbooks, manuals, etc.
History
For all works except those dealing with literature and music, for which *History and criticism* is used.
Indexes
Outlines, syllabi, etc.
Periodicals
Societies, etc.
Statistics
Study and teaching
Yearbooks

Abbreviations

THE FOLLOWING subdivisions are abbreviated on Library of Congress cards:

Antiquities	Antiq.
Bibliography	Bibl.
Bio-bibliography	Bio-bibl.
Biography	Biog.
Boundaries	Bound.
Commerce	Comm.
Description	Descr.
Description and travel	Descr. & trav.
Dictionaries and encyclopedias	Dict. & encyc.
Directories	Direct.
Discovery and exploration	Disc. & explor.
Economic conditions	Econ. condit.
Emigration and immigration	Emig. & immig.
Foreign relations	For. rel.
Genealogy	Geneal.
History	Hist.
History and criticism	Hist. & crit.
Industries	Indus.
Manufactures	Manuf.
Periodicals	Period.
Politics and government	Pol. & govt.
Sanitary affairs	Sanit. affairs
Social conditions	Soc. condit.
Social life and customs	Soc. life & cust.
Statistics	Stat.

The abbreviations Gt. Brit. and U.S. are used both as main headings and in subdivisions. However, United States is not abbreviated when it stands alone and when it occurs at the beginning of a phrase heading, *e.g.* United States in literature. Great Britain is not abbreviated when it stands alone and when it is used anywhere in a phrase heading, *e.g.* Socialism in Great Britain.

Previous Editions of the Subject Heading List

Subject Headings Used in the Dictionary Catalogs of the Library of Congress.

Washington, Government Printing Office.

1st edition	1910–1914	2 vol.	1088 p.
2d edition	1919	9 pts.	1315 p.
3d edition	1928	1 vol.	1535 p.
4th edition	1943	2 vol.	2743 p.
5th edition	1948	1 vol.	1204 p.
6th edition	1957	1 vol.	1357 p.

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LIBRARY OF CONGRESS
Subject Headings

Volume I

A–Laser

Ninth Edition

Subject Cataloging Division
Processing Services

LIBRARY OF CONGRESS WASHINGTON 1980

101

Preface

In the spring of 1979 it was determined that funds would be available to print a ninth edition of *Library of Congress Subject Headings* if the data could be prepared for publication quickly. However, deadlines could be met only by limiting the coverage of the ninth edition to those headings existing through December 1978 and by omitting the lists of subdivisions that had been printed in the introduction to the eighth edition. The cutoff date was accepted with regret that many desirable changes could not, therefore, be introduced, but with pleasure that, for the first time in thirty years, a new edition would be available within five years of the appearance of a previous edition. The omission of the lists of subdivisions was acceptable because the reprint of the eighth edition introduction will continue to be sold by the Cataloging Distribution Service until such time as another publication makes it obsolete.

The master data base of subject headings through 1978 was prepared by the staff of the Subject Headings Editorial Section and edited for this edition by Laurence Smelser, Mary Lou Miller, and Bonnie Novack under the direction of Saul Snyder, editor of subject headings. A computer program was then run against the data base to change the instruction (*Direct*) to (*Indirect*) in order to make the list conform to a policy change made a few years previously. The program also removed free-floating subdivisions if the subdivisions did not contain a cross-reference structure. The data base was further processed by the Automated Systems Office to produce an interim magnetic tape and then by the Cataloging Distribution Service to produce the dianegatives from which the printing plates for this publication were produced.

This ninth edition of *LCSH* represents the fullest capacity of the existing automated system for subject headings: to produce a new printed publication quickly on short notice. It is hoped that the next edition will be produced under a greatly expanded system with the capacity to facilitate massive and complex change in subject headings.

Our appreciation is extended to the staffs of the Subject Cataloging Division, the Automated Systems Office, and the Cataloging Distribution Service for making this ninth edition a reality.

JOSEPH H. HOWARD
Assistant Librarian
for Processing Services

MARY K. D. PIETRIS
Chief, Subject Cataloging Division

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LIBRARY OF CONGRESS SUBJECT HEADINGS 1

Introduction

SCOPE AND COVERAGE

The ninth edition of *Library of Congress Subject Headings* contains the headings established and applied by the Library through December 1978, with some exceptions noted below. Subsequent additions to and changes in these headings have been published in the supplements, starting with 1979, issued quarterly, and cumulating into annual volumes.

Like its predecessors, the list continues to be an accumulation of subject headings established and applied by the Library of Congress since 1897. As Richard S. Angell wrote in the introduction to the sixth edition,

> The list is the product of evolutionary forces, among them the growth of the Library's collections, semantic change, and varying theories of subject heading practice over the years. As a consequence the list is, at any point in time, an accurate reflection of practice but not a complete embodiment of theory.

In the years since that statement was written, the list has become a less accurate reflection of practice, with some headings and subdivisions remaining in the list in contradiction to current policies. It is far easier to announce a change in policy than to eradicate every example of an obsolete practice in the list.

Two major changes were made by computer program to the contents of this edition. First, the previously announced adoption of indirect local subdivision has been implemented with the substitution of the instruction (*Indirect*) for (*Direct*). The rules for dividing by place indirectly are given below. Second, many free-floating form and topical subdivisions were removed from the list under specific subjects if no cross-references to the subdivisions were involved. "Free-floating subdivisions" are those that catalogers may use as appropriate without the usage being specifically authorized in the list. These subdivisions, however, may have limited application and may be assigned only under limited categories of headings in specifically defined situations. These free-floating subdivisions are listed in the introduction to the eighth edition and were amended in the 1977 supplement to *LCSH* and in issues of *Cataloging Service Bulletin*.

When the computer program processed the list to remove free-floating subdivisions, some complications in the system caused some free-floaters to be inexplicably overlooked, while others were removed with surprising consequences. One unexpected result was the accidental removal of the last subdivision, if not associated with cross-references, under non-topical headings. If these subdivisions removed involve time periods, they will be reinstated in future supplements when found. In some cases subdivisions may have been removed from model headings.

Subject Headings Omitted from the List

To conserve space, certain categories of headings found in LC cataloging records were omitted by editorial policy from *Library of Congress Subject Headings* (see p. viii of the eighth edition). However, because of the value in having a standard list of these so-called "nonprint" headings readily available to all catalogers using LC subject headings, this policy was amended. Commencing in January 1976, most of these headings were included along with the other headings regularly listed. Only those headings established for works being cataloged currently are included; no effort is made to include retroactively those headings previously established, unless an existing older heading is involved in the reference structure of a new heading. As a result, a remarkable unevenness of coverage will be apparent in the list, with uncommon names printed while well-known but previously established names are not included.

Categories of Former Nonprint Headings Now Included

1. Sacred books.
2. Names of families, dynasties, royal houses.
3. Gods, legendary and fictitious characters.
4. Geographic regions and features, city sections.
5. Archaeological sites, ancient cities, empires.
6. Structures, buildings, roads, parks and reserves, squares, etc.
7. Works of art.

8. Biological names.
9. Chemicals.

Categories of Headings Still Omitted

1. Most author headings, including anonymous classics in general, motion pictures, radio and television programs, etc. However, some personal and corporate headings are included, primarily for illustration.
2. Individually named art collections based on a personal name.
3. Regions of cities and metropolitan areas.

Music Headings

Although a large number of existing music headings have been printed in the LC list of subject headings, in the future, when specific cross-references are not needed, LC will not be printing headings with qualifiers specifying instruments or vocal parts when the main heading has a general scope note, with or without a general *see also* reference. These headings are:

Headings for instrumental chamber music not entered under musical form

Trios. Quartets, Quintets, etc.
Brass trios, etc.
String trios, etc.
Wind trios, etc.
Woodwind trios, etc.

Headings for musical forms that take qualifiers for instrumental medium

Canons, fugues, etc.
Chaconnes
Chorale preludes
Marches
Minuets
Monologues with music
Overtures
Passacaglias
Polkas
Polonaises
Potpourris
Rondos
Sacred monologues with music
Sonatas
Suites
Symphonic poems
Symphonies
Trio-sonatas
Variations
Waltzes

Choruses; Choruses, Sacred; and Choruses, Secular, qualified by number of vocal parts and accompanying medium.

Songs and Sacred songs qualified by voice range and accompanying medium.

The process of eliminating from the list those headings given in the categories above was begun in the mid 1970s but some unnecessary or incorrect headings remain in the list because of lack of time to process the corrections.

The decision not to print all headings with qualifiers specifying instruments is based on the fact that the order of instruments listed in qualifiers has now been firmly established and an appropriate heading can be formulated as needed by following the sequence of instruments given: (1) keyboard instruments, (2) wind instruments, (3) plectral instruments, (4) percussion and other instruments, (5) bowed stringed instruments, (6) unspecified instruments, and (7) continuo. The instruments in each category are given in alphabetical order with the exception of bowed stringed instruments, which are given in score orders, e.g., **Octets (Piano, clarinet, flute, oboe, percussion, violin, viola, violoncello); Octets (Piano, clarinet, flute, guitar, mandolin, accordion, percussion, double bass); Quartets (Flute, violin, viola, continuo)**

In headings for duets, the order of instruments prescribed above is not always followed. When one of the instruments is chordal (usually a keyboard instrument) or serves as an accompaniment for the other, it is given in second position, e.g., **Violin and piano music; Violin and harp music; Harp and piano music; Piano and organ music.** For each duet heading, the main list may be consulted since a *see* reference is always made from the alternate possibility.

When two or more of an instrument are needed for performance, the arabic number is now placed after the name of the instrument and enclosed by parentheses, e.g., **Sonatas (Pianos (2), 8 hands); Violins (2) with string orchestra; Trios (Piano, unspecified instruments (2)).**

Other Omissions from This Edition

In order to prepare this edition of *LCSH* quickly, it has been necessary to omit several features that made the introduction to the eighth edition so useful.

The listing of "Standard Reference Patterns for Nonprint Headings" from the eighth edition and its supplementary "References Omitted from the Printed List" from the 1974-76 supplement could not be included in this edition.

The listing "Headings Serving as Patterns for Sets of Subdivisions" from the eighth edition was updated in the 1977 supplement to *LCSH*. The list was not reproduced here but will be included, with additional revision, in a later supplement.

The two lists of subdivisions under place names, the first for regions, countries, states, metropolitan areas and city regions, etc., and the second for cities have also been omitted. An up-to-date and comprehensive list is planned for inclusion in the 1979 annual supplement.

Finally, the list of "Most Commonly Used Subdivisions" could not be included. It is hoped to bring that list under automated control so that a revised edition may be issued soon.

COMPONENTS OF ENTRIES

Main headings are listed in boldface type, e.g., **Alphabet, Life on other planets, Nuclear physics.** A heading may be followed in italics by the code (*Indirect*), which shows that the heading may be subdivided by place, the rules for which are described under "Local subdivision" below, and by class numbers. Scope notes that give guidance in the meaning or application of a heading may follow in a separate paragraph. References associated with

the heading then are listed in groups, followed by subdivisions of the subject heading, which may have any or all of the above-named elements.

Class Numbers

Many of the headings are followed by Library of Congress class numbers that generally represent the most common aspect of a subject. If several aspects of a subject are covered by different class numbers, the latter are qualified by a term indicating the specific discipline to show the distinction, e.g.:

Diesel motor *(TJ795)*

Norwegian language *(PD2571–2699)*

Shellfish *(Cookery, TX753; Public health, RA602.S2; Shellfish as food, TX387; Zoology, QL401–445)*

Class numbers are added only when there is a close correspondence between the subject heading and the provisions of the Library of Congress classification schedules. Since these, as well as the subject heading list, are subject to continuous revision, the class numbers in the list should not be used without verification in the latest editions of the schedules and their supplements.

Scope Notes

Scope notes are provided when needed to ensure consistency of subject usage by specifying the range of subject matter to which a heading is applied in the Library's catalogs, by drawing necessary distinctions between related headings, or by stating which of several meanings of a term is the one to which its use in the Library's catalogs is limited. These notes appear in the list immediately following the headings with which they are used. A typical example may be found under the heading **Civil service.**

REFERENCES

Two kinds of cross-references are made: *see* references, which refer from terms not used to the headings used, and *see also* references, which refer from a heading to more specific or related headings.

For the sake of economy in publishing these two volumes, some references may not have been included, although they are desirable and may have been made for the Library of Congress catalogs. Other libraries are encouraged to be generous and imaginative in the addition to their card catalogs of useful references not present in *LCSH*. Since this list represents only a portion of authorized headings and references, it is expected that others will use the references listed as a starting point, not as the only acceptable references.

See References

See references are made from terms not used to terms used. *See* references appear in the list in the form: Labor unions *see* Trade-unions. Under the heading referred to, the notation *x* indicates that the *see* reference is made.

See references are not necessarily statements of equivalence; they simply indicate to catalogers and catalog users that a particular word or concept does not have a separate file but is entered under another heading.

See references are made from synonyms, variant spellings, variant forms of expression, and alternative constructions of headings. Headings consisting of more than one word frequently have *see* references from the words not chosen as the entry element. *See* references are not normally made in this list from abbreviations, nor are they made from foreign-language equivalents. Others may wish to make these references if they seem to be useful.

See Also References

See also references link two terms that are both used as subject headings. Under a subject heading in this list, *see also* references are preceded by the code *sa*. The code *xx* precedes headings from which a *see also* reference is made.

See also references are made from broader to more specific headings, and between related headings. Normally, a heading is related to one immediately next to it in the subject heading hierarchy. Since the referenced headings are linked in turn to other headings, references for distant relationships are not currently made.

In this list the current policy is to prefer to make *see also* references instead of *see* references. An example of this policy is that if a *see* reference begins with the same term as a *see also* reference which is required for hierarchy purposes, the *see* reference is omitted. For example:

Exterior lighting
xx Lighting

is made
instead of

Exterior lighting
x Lighting, Exterior

For those libraries that provide only *see* references in their catalogs, it may be advantageous to review the cross-reference structure of headings carefully to determine whether additional *see* references should be created.

For economy in the printed list, *see also* references are not made when the narrower term begins with the same term as the broader heading. In addition, when a number of more specific terms all begin with the same word, a general *see also* reference is made instead of numerous individual references, e.g.:

Chemistry
sa headings beginning with the word Chemical

Also, in many cases a general *see also* reference is made to suggest the types of headings that should also be sought, e.g.:

Dog breeds
sa names of specific breeds, e.g., Bloodhounds, Collies

In these cases, it is expected that each library will make specific *see also* references to each individual breed of dog for which that library holds works. Such references have been made for the Library of Congress catalogs.

Ordinarily, the making of *see also* references creates a hierarchical arrangement in which headings become more and more narrow. By tracking the terms following the code *sa* one should be led to either more specific or related terms. By tracking the terms following the code *xx* one should be led to broader terms. The following example illustrates this:

Acanthodes
xx Acanthodidae

Acanthodidae
sa Acanthodes
xx Acanthodii

Acanthodii
sa Acanthodidae
xx Fishes, Fossil

By following the *sa* (*see also to*) references, it is apparent that the most narrow heading is **Acanthodes.** By following the *xx* (*see also from*) tracings, it is equally apparent that the broadest heading is **Fishes, Fossil.**

For the purpose of instructing nonlibrarians in the use of *LCSH*, the use of the codes may be stated as follows:

sa = term is used, usually narrower or related
x = term is not used
xx = term is used, usually broader or related

SUBDIVISION PRACTICE

Main headings may be subdivided by four kinds of subdivisions, which are discussed separately below.

Topical Subdivisions

Topical subdivisions are used under main headings or other subdivisions to limit the concept expressed by the heading to a special subtopic, e.g., **Invalids—Recreation; Locomotives—Dynamics.** Those topical subdivisions that have been found appropriate for a main heading are listed under that heading following the cross-references. However, many subdivisions that occur with great frequency are not printed under each heading. Instead, these subdivisions are listed with instructions for their application in the separately available introduction to the eighth edition.

Form Subdivisions

Form subdivisions are used to indicate the form in which the material on a subject is organized and presented (e.g., congresses, dictionaries, periodicals) and as such are added as the last element to any heading, after main heading or subdivision. Form subdivisions represent what a work is, rather than what it is about. Because form subdivisions are frequently of general application under any topic, they are seldom included in the listing of subdivisions under specific main headings.

Period Subdivisions

Period subdivisions are used to denote chronological sequences under countries or topical headings. Period subdivisions are also used to mark significant dates in the evolution of the literature on a subject, e.g., **Philosophy, French—18th century,** or to divide arbitrarily a large file by date of publication, e.g., **Aeronautics—Early works to 1900; Mathematics—1961–**

Local Subdivisions

Subject headings and subdivisions that may be subdivided by the name of a county or other political entity, region, or geographic feature are identified in the list by the designation (*Indirect*) following the heading and preceding class number, if any. The code (*Indirect*) denotes that a heading may be subdivided by place according to rules below. These rules have undergone changes since the mid-1970s, so that earlier cataloging may not reflect the policies stated below.

Basic Rule

When subdividing locally by any country, or by any jurisdiction or region that does not lie wholly within any single existing country, the name of that country or jurisdiction immediately follows the subject heading being divided. Such jurisdictions or regions may include historic kingdoms, empires, etc. or geographic features and regions, such as continents and other major regions, bodies of water, mountain ranges, etc.

Geology—Europe
Transportation—Great Lakes
Agriculture—Nile Valley
Elections—France

If the local subdivision is smaller than a country and wholly contained within it, the name of the country is interposed between the topical heading and the name of the local entity including subordinate political jurisdictions (e.g., provinces, counties, cities), historic kingdoms, geographic features and regions, and islands.

Agriculture—France—Rhone Valley
Music—Switzerland—Zürich

Only two levels of geographic subdivision are authorized, with the country usually serving as the collecting level.

Exceptions to Interposing Country

Exceptions to the rule of interposing the name of a country are of two types. In some cases a political jurisdiction smaller than a country is used as the collecting level under which smaller areas are grouped. In other cases, no intervening term is interposed, so that the locality follows the subject heading immediately, in effect, subdividing directly.

1. For four countries—Canada, the United States, Great Britain, and the Soviet Union—the country name is not used as a collecting level. Instead, assign directly the provinces of Canada, the states of the United States, the constituent countries of Great Britain, and the republics of the Soviet Union. Do not subdivide through the headings for any of these four countries to bring out any specific locality. Either interpose the province, state, constituent country, or republic, e.g.:

Music—British Columbia—Vancouver
Sports—England—London metropolitan area
Nursing—Ukraine—Kiev (Province)
Agriculture—California—San Joaquin Valley

or, if the locality is larger than any one of the provinces, states, etc., divide the subject directly, e.g.:

Zoology—Siberia
Geology—Rocky Mountains
Education—Southern States

2. Assign directly the names of regions (or the provinces, states, etc. of Canada, the United States, Great Britain, and the Soviet Union) that are wholly within a single country if the first word of the region's name is the name of the country, etc., e.g.:

Geology—Italy, Southern
Geology—Brazil, Northeast
Geology—California, Southern

3. Assign directly the names of the following cities: Berlin, New York, Washington, D.C., and Jerusalem.

Exceptions Involving Islands

Assign directly names of islands or groups of islands that are situated some distance from land masses, even if they do not represent autonomous political units, e.g., **Geology—Bermuda Islands.**

Assign indirectly names of islands that lie close to a large land mass (usually within the territorial limits of a country) and are politically subdivisions of the country, e.g., **Agriculture—Italy—Sicily.**

Assign indirectly the name of an individual island within an island group situated some distance from a land mass, even if the group is not an independent nation, e.g., **Water-supply—Canary Islands—Teneriffe.**

Exceptions Involving Cities

When composing a subject heading relating to a city, it is particularly important to note the following:

Some headings designated (*Indirect*) may not be subdivided by names of cities. These headings are used instead as subject subdivisions under names of cities; that is, the name of the city is subdivided by the subject. For each subject heading that is to be used in this manner, the following reference is given in the list: "also subdivision . . . under names of cities." However, headings naming a metropolitan area or a city region are not treated as cities but as regions smaller than states. The following examples show the conversion of a heading divided indirectly into a subdivision under subject and the proper treatment of metropolitan areas and city regions:

Libraries—Illinois—Cook County
Libraries—Illinois—Chicago metropolitan area
Libraries—Illinois—Chicago region
BUT **Chicago—Libraries**

Fire prevention—California
BUT **Los Angeles—Fires and fire prevention**

Name Changes

When subdividing locally, use the latest name of any entity whose name has changed, regardless of the form of the name used in the work cataloged, e.g.:

Title: The Banks of Leopoldville, Belgian Congo. 1950.
1. **Banks and banking—Zaire—Kinshasa.**

Territorial Changes

Subdivide locally only in accordance with the current territorial sovereignties of existing nations, regardless of the past territorial divisions described in the work. For a region or jurisdiction that has existed under various sovereignties, interpose the name of the country now in possession, as long as the region or jurisdiction is located wholly within that country, e.g.:

Title: The Present Status of Education in Alsace. 1910.
1. **Education—France—Alsace.**

Alteration of the Entry during Indirect Subdivision

When subdividing indirectly, if the geographic qualifier of the subordinate entity is identical with the name of the entity through which the smaller entity is subdivided, omit the geographic qualifier of the smaller entity to avoid redundancy. Do not delete the qualifier when the qualifier and the higher level area are not identical.

Sill River, Austria
BUT **Stream measurements—Austria—Sill River**

Amazonas, Brazil (State)
BUT **Transportation—Brazil—Amazonas (State)**

Porodin, Macedonia
BUT **Stone age—Yugoslavia—Porodin, Macedonia**

Order of Precedence of Local Subdivision

If both local subdivision and topical or form subdivision are to be applied, the order of subdivisions is as follows: (1) When the word (*Indirect*) follows the main heading, the geographic name is interposed between the main heading and the subdivision, e.g.:

Construction industry (*Indirect*)
—Finance
Construction industry—Poland—Finance

(2) When the word (*Indirect*) follows the subject subdivision, the local subdivision is placed at the end, e.g.:

Construction industry (*Indirect*)
—Law and legislation (*Indirect*)
Construction industry—Law and legislation—Poland

When a main heading is first divided by place and then by subject, a *see also* reference may be made in the following form:

Construction industry—Finance
see also
Construction industry—[local subdivision]—Finance

FILING ARRANGEMENT

Filing rules that provide for efficient arrangement of bibliographic entries by computer have been followed. Although not yet applied to the Library of Congress card catalogs, the rules are being used in computer-generated bibliographic products.

The basic principle is to file a heading strictly as expressed in its written form, word by word. A word is defined as consisting of one or more letters or numerals set off by spaces or marks of significant punctuation, such as the hyphen. Therefore, abbreviations, acronyms, and initials without interior punctuation (e.g., Dr., ALGOL, IBM) are filed as words. Initials separated by punctuation are filed as separate words at the beginning of their alphabetic group. Modified letters, with diacritics such as the umlaut, are treated like their plain equivalents in the English alphabet.

C–coefficient
C.F. & I. clause
C.O.D. shipments
Ca Gaba Indians
Cazcan Indians
CCPM test
Crystals
CTC system (Railroads)

Numbers that are expressed in digits, both arabic and roman, precede alphabetic characters and are arranged in increasing numeric value. Thus, it may be necessary to look under more than one possible form to find a heading, i.e., under numeric or alphabetic version. The shortest period is filed first in a numeric progression:

Great Britain—History—To 55 B.C.
Great Britain—History—To 449
Great Britain—History—To 1066
Great Britain—History—To 1485

Inverted headings file ahead of headings with parenthetical qualification:

Children
Children, Adopted
Children, Vagrant
Children (International law)
Children (Roman law)

In any subject heading, subordinate elements that follow a dash are grouped in the following order:
(a) period subdivisions, arranged chronologically
(b) form and topical subdivisions, arranged alphabetically
(c) geographic subdivisions, arranged alphabetically

These sequences are maintained at every level of subject subdivision.

Annotated Card Program

Subject Headings For Children's Literature

In the fall of 1965 the Library of Congress initiated the Annotated Card Program. The purpose of this program was to provide a more appropriate and in-depth subject treatment of juvenile titles and thus offer easier subject access to the materials. This was accomplished chiefly through a more liberal application of the Library of Congress subject headings—the standard or master list contained in these two volumes. In some cases this necessitated a reinterpretation in application as well as the simplification of certain headings and, in a few instances, required the creation of new headings to provide access to materials for which no headings had previously existed. Through these three steps catalogers have arrived at a list of more than four hundred headings and subdivisions to date which vary in application and form from standard LC subject headings. The Annotated Card Program (AC) list is in effect a list of exceptions to the master LC list and should therefore be consulted in conjunction with the latter. (AC headings appear in brackets on the LC cards coded AC.)

While the AC list entails certain departures from the standard LC list, its original intent was not to exist primarily as a third list. The AC list was to provide a liberal extension of the standard LC list and any departure from LC was to be guided by the *Sears List of Subject Headings*, the Committee on Cataloging of Children's Materials of the American Library Association, and the needs of children's libraries as articulated by authorities in the field. Nonetheless, it was recognized that users of LC annotated catalog cards for children's literature needed an explicit statement regarding the authority lists used for the subject headings assigned and a statement of the policies followed in assigning them.

In 1969 the first edition of *Subject Headings for Children's Literature* was published. It explained guiding principles of the AC program and listed those headings that varied from LC standard headings in application or form. Since then the list has more than doubled. New policies have been initiated and old ones changed or terminated as feedback was received from the ALA Committee on Cataloging of Children's Materials and from the field.

This updated introduction explains the ways in which AC headings depart from standard LC headings in form and policy. It includes sources consulted in establishing headings, terms not used, and subdivisions that are an exception to LC standard policies or patterns. The list of AC headings is printed complete with scope notes and cross references, and since it is a list of exceptions to the LC, it is to be used in conjunction with the standard list. Additions to this list will be found in the issues of *Supplement to LC Subject Headings*.

A representative from the Children's Literature Section, which administers the Annotated Card Program, has worked closely with the ALA Committee on Cataloging of Children's Materials. The committee has provided a forum for those concerned with the cataloging of children's materials, forwarding the comments and suggestions from interested persons in the field to the Library of Congress as well as making specific recommendations of its own.

The committee has considered the problems of cataloging for children's collections, particularly the lack of uniformity prevalent in cataloging children's materials among various sources. As a step toward urging standardization, the committee recommended at the 1969 ALA Midwinter Conference "the adoption of Library of Congress cataloging of children's materials as the national standard."

Application of Subject Headings

With a few exceptions the bracketed headings used on AC cards are standard LC subject headings. Some of the chief differences between the AC and LC headings are in application rather than terminology. For example:

(1) Elimination of subdivisions such as "Juvenile fiction" and "Juvenile literature" which would be useless in a children's literature catalog.

(2) The application of subject headings to fiction when such headings can provide a helpful approach to the literature. For example, if a story adds to the reader's information about a country, a social problem, or a profession, such headings are used as: **Switzerland—Fiction; Drug abuse—Fiction; Teachers—Fiction.** Abstract concepts such as **Friendship—Fiction** are also recognized.

(3) The use of both specific and general subject headings. In a catalog for a children's collection a young reader can locate a biographical work through (a) the specific name of the individual, (b) the broader heading of the individual's career or particular contribution, or (c) the period of history in which the individual flourished and was influential if it is pertinent to the work being cataloged. For example: 1. **Bickerdyke, Mary Ann (Ball) 1817–1901.** 2. **Nurses.** 3. **United States—History—Civil War, 1861–1865.**

(4) The use of both popular and scientific terms. For material intended for very young children, the popular term is used, as in the headings **Weather** and **Fossils.** When the book is intended for older children, both the popular and scientific terms are frequently traced. Thus a single card may carry such tracings as: 1. **Weather** 2. **Meteorology.** Or 1. **Fossils** 2. **Paleontology.** When books are intended for young adults, ordinarily only the scientific terminology is provided; for example, **Meteorology** or **Paleontology.**

(5) Use of headings denoting form or kind. Such headings, created to make certain types of material more accessible to the reader, include **Jokes, Counting games, Stories without words.**

Categories of AC Headings

The headings used on annotated cards represent four categories: standard LC, modified LC, Sears, and new headings established for exclusive use on annotated cards.

By far the most numerous are the standard LC headings assigned in the usual way. Included are topical headings, most proper names, geographic names, and subdivisions. The following tracings selected at random illustrate this usage: **Chemistry, Analytic—Laboratory manuals; Conductors (Music); Isotopes; Afro-American athletes; Socially handicapped; Utah—History; Vietnamese Conflict, 1961–1975; Warren, Earl, 1891–1974.**

The modified LC headings, many of which conform to usage in the Sears list, consist of the following types of adjustments: (1) Spelling and hyphenation are modernized in such headings as **Bullfights; Caddis flies; Folklore; Trotsky, Leon;** and **Columbus, Christopher.** (2) Subdivision is often used rather than inversion or qualification, for example: **Animals—Infancy; Cookery—Meat; Speech—Disorders.** (3) Subdivided headings are in some instances made adjectival headings, such as **Christmas poetry.** (4) Superfluous words and phrases are deleted in such headings as **Picture books** [for children] and **First aid** [in illness and injury].

Sears headings and subdivisions which appear to be more appropriate than those in the LC list are accepted for use. The following Sears headings and subdivisions are typical: **Fossils; Parades; Pigs; Robbers and outlaws; —Collections.**

Certain headings are established specifically for use on LC annotated cards when neither Sears nor the LC lists provide suitable terminology, form, or scope. Into this group fall such headings as **Clay modeling; Moon rocks;** and **Safety.**

In establishing a heading that varies from LC, catalogers consult a considerable number of sources in arriving at the term thought to be the most effective for AC purposes. Literature in the subject area is consulted; spelling is accepted from *Webster's Third New International Dictionary*, with the exception of hyphenated terms; indexing sources widely used by the public, such as *The Reader's Guide to Periodical Literature* and *The New York Times Index*, are checked for their indexing terms. Sears is consulted, as are leading children's encyclopedias and a number of other reference sources usually found in public and school libraries.

Subdivisions

While many of the most commonly used LC subdivisions of general application listed in the introductory material of *Library of Congress Subject Headings*, eighth edition and its reprint, can be used in a card catalog devoted exclusively to children's literature, some of them require modifications in form or application. The following subdivisions are exceptions to the LC list and should be used by the librarian in conjunction with the LC standard subdivision list.

BIOGRAPHY
Used for both collected and individual biographies but only under names of ethnic groups and under subject fields where no specific term designates the profession or contribution of the biographee. For example, **Indians of North America—Biography,** and **Circus—Biography,** but **Engineers,** without subdivision, for biographies of persons belong to this occupational group.

COLLECTIONS
Used for publications containing works by more than one author.

FICTION
Used under all subjects for individual or collected works of fiction on identifiable topics.

GEOGRAPHY
Used under the names of states, regions or countries.

GUIDES
Used in place of the LC subdivision Guide-books.

HABITS AND BEHAVIOR
Used under any kind of animal, bird, reptile, or fish.

ILLUSTRATIONS
See Pictorial works.

KINGS, QUEENS, RULERS, ETC.
Use under names of geographic areas and ethnic groups.

PICTORIAL WORKS
Used under all subjects presented exclusively or predominantly through pictorial matter.

Subdivision and Qualifiers not Used

The subdivision "United States" and the qualifying term "American" are not often used since most of the materials purchased by children's libraries in the United States reflect an American orientation rather than an international one. Thus **Bridges—United States** becomes simply **Bridges**, a heading which can be used both for works about United States bridges and for works about bridges in several different countries. However, other geographical subdivisions are retained and are used for books limited in scope to a particular country or a particular state, as in the heading **Bridges—Great Britain.**

An exception is made for subject headings for topics whose treatment is predominantly international in scope, such as **Art, Folklore,** and **Music.** Where the presentation is limited to the United States, qualification or subdivision is used, for example: **Art, American; Folklore—United States; Music, American.**

Another exception is made for subject headings denoting classes of persons, which are never subdivided geographically for any country. For example, **Athletes; Composers; Explorers.**

The qualifying term "Children's" is usually deleted so that a heading such as **Children's parties** becomes simply **Parties.** Similarly, **Children's songs** becomes **Songs.**

Names

Names of persons are anglicized to concur with popular English usage such as **Christopher Columbus** (rather than Cristoforo Colombo) and **William Tell** (rather than Wilhelm Tell). These proper names appear in the AC list and those used that do not agree with LC usage will appear in the supplements to the subject heading list.

Geographic and place names, as established by LC, are based on the form determined by the United States Board on Geographical Names.

Exceptions to LC usage of the names of plants and animals are listed. For those not appearing consult the LC standard list.

This introduction and the following list were prepared in the Subject Cataloging Division by the Children's Literature section. The list includes all Annotated Card headings which vary in application or form from the standard LC subject headings. The AC list is to be used in conjunction with the list of LC subject headings and its cross-reference structure is to be observed with the list of exceptions noted below. Some of the headings which appeared in the first two editions of *Subject Headings for Children's Literature* have since been incorporated into the main body of the standard LC list and have therefore been removed from the following list.

Symbols

sa (see also)	indicates a reference to a related or subordinate topic
x (see from)	indicates a reference from an expression not itself used as a heading
xx (see also from)	indicates a related or broader heading from which a *see also* reference is made